

PROCEEDINGS
OF THE
EIGHTH ANNUAL
FLEET MARINE FORCE
MEDICAL DEPARTMENT OFFICERS
CONFERENCE

6-10 JUNE 1983

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

BETHESDA, MARYLAND



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380

IN REPLY REFER TO
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21 Oct 1983

From: Commandant of the Marine Corps

Subj: 1983 Fleet Marine Force Medical Department Officers
Conference Proceedings

1. The Proceedings of the 1983 Fleet Marine Force Medical Department Officers Conference reports the findings and recommendations of the several conference working groups. Working groups were established to grapple with major issues on medical support to the Fleet Marine Force and were composed of officers whose expertise and/or position dictated their involvement. While the findings and recommendations of working groups do not necessarily reflect Navy or Marine Corps policy, they do serve as points of departure for prospective changes to existing policy or developing policy on newly recognized issues. To this end, the finding and recommendations are staffed to the appropriate office or activity for action. Status reports of action taken will be solicited from the organization to which the findings and recommendations were staffed and periodically will be forwarded to the Fleet Marine Forces.

2. Included in the Proceedings are texts or extracts of the major presentations and addresses made to the conferees and copies of briefs on current programs of interest to Medical Department personnel assigned to the Marine Corps.

3. Requests for additional copies may be addressed to the Office of the Medical Officer, Headquarters U.S. Marine Corps, Washington, D.C. 20380.


J. L. PETERSON
By direction

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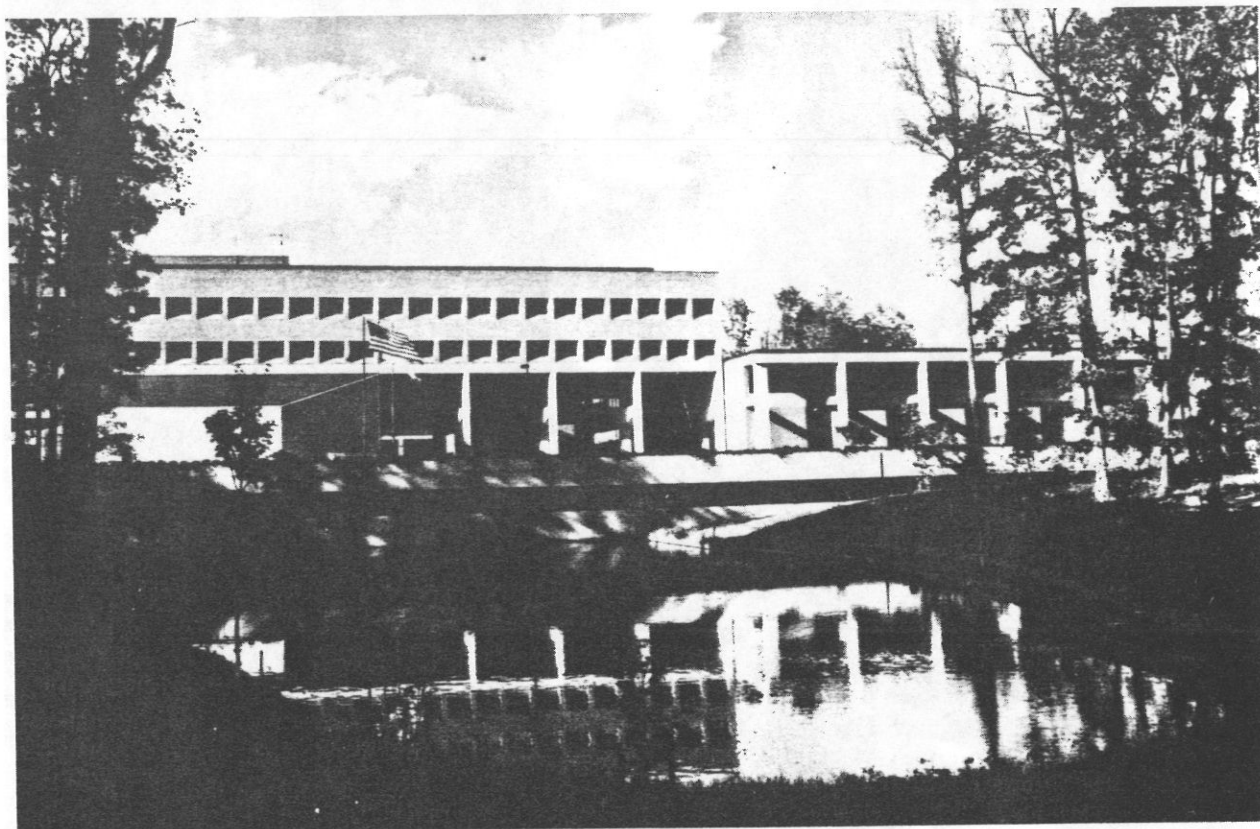
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Uniformed Services University of the Health Services
Bethesda, Maryland



REAR ADMIRAL JAMES ALLEN ZIMBLE, MC, USN

Rear Admiral Zimble was born in Philadelphia, PA on 12 October 1933, the son of Mr. and Mrs. Nathan N. Zimble. He resided in Little Rock, AR during his formative years from 6 weeks to 13 years of age. Rear Admiral Zimble acquired his B.S. degree at Franklin and Marshall College, Lancaster, PA, and in 1959 received his M.D. from the University of Pennsylvania School of Medicine. He was a member of the Naval Reserve as a medical student from 1956 to 1959.

Rear Admiral Zimble served a rotating internship from 1959 to 1960 at U.S. Naval Hospital, St. Albans, NY. From 1960 to 1961, he attended Deep Sea Diving School, Naval Gun Factory, Washington, DC; the Officer's Basic Course and the Special Radiation Control and Health Physics Course, U.S. Naval Submarine School, New London, CT; and nuclear power training at the Nuclear Reactor Prototype, West Milton, NY. He subsequently was assigned to the USS JOHN MARSHALL (SSBN-611) where he served as the plank owner medical officer of the Blue Crew. In 1963, he received Submarine Medical Qualification. Rear Admiral Zimble received residency training in Obstetrics and Gynecology at U.S. Naval Hospital, St. Albans, from 1963 to 1966. His subsequent assignments include: 1966-1970 OB-GYN staff, Naval Hospital, Camp Pendleton, CA; 1970-1972 OB-GYN staff, Naval Hospital, Philadelphia, PA; 1972-1976 Chief, OB-GYN Service and Director, Clinical Services, Naval Hospital, Lemoore, CA; 1976-1978 Director, Clinical Services, Naval Regional Medical Center, Long Beach, CA; 1978-1981 Commanding Officer, Naval Regional Medical Center, Orlando, FL; 1981-1983 The Medical Officer, U.S. Marine Corps, Washington, D.C. In June 1983 he reported for duty as the Fleet Surgeon on the staff of the Commander-in-Chief, Atlantic Fleet.

Rear Admiral Zimble's military awards include the Legion of Merit, the Defense Meritorious Service Medal, the Meritorious Service Medal, Navy Commendation Medal, and Navy Meritorious Unit Citation. He is a Diplomate of the American Board of Obstetrics and Gynecology, a Fellow of the American College of Obstetrics and Gynecology, a member of the Association of Military Surgeons of the United States, and a member of the Inter-Agency Institute for Federal Health Care Executives.

Rear Admiral Zimble is married to the former Janet Bailey of Westfield, NJ. They have six children, two boys and four girls, ranging in age from 19 to 8, two of whom still reside at home.



COMMODORE JOSEPH SAMUEL CASSELLS, MC, USN

Commodore Cassells was born 9 November 1934 in Chester, South Carolina. He graduated from Duke University School of Medicine in 1960. He completed his internship at the National Naval Medical Center, Bethesda, Maryland and served his residency in Internal Medicine at Naval Hospital, St. Albans, Long Island, New York. He received his MPH from The Johns Hopkins University School of Public Health, Baltimore, Maryland in 1968.

Commodore Cassells' duty assignments include General Medical Officer, Third Marine Division, Okinawa, 1961-1962; Internist, U.S. Naval Hospital, Subic Bay, Republic of the Philippines, 1965-1967; The Johns Hopkins University School of Public Health, Baltimore, Maryland, 1967-1968; The Johns Hopkins Center for Medical Research and Training, Calcutta, India (Tropical Medicine) 1968-1969; Head, Academic Department, Naval Medical School, and consultant in tropical medicine, National Naval Medical Center, Bethesda, Maryland, 1969-1971; Chief, Experimental Parasitology Division, Naval Medical Research Institute, Bethesda, Maryland, 1971-1974; Project Director, Navy Physician's Assistant Program, 1973-1975; Head, Medical Corps Programs, Naval Health Sciences Education and Training Command, Bethesda, Maryland, 1974-1975; Deputy, Special Assistant to the Surgeon General for Education and Training, Washington, D.C., 1975-1977; Special Assistant to the Surgeon General for Professional Matters, Washington, D.C., 1977-1978; Director of Clinical Services, Naval Regional Medical Center, San Diego, California, 1978-1980; Commanding Officer, Naval Regional Medical Center, Charleston, South Carolina, 1980-1982; Deputy Commander for Health Care Operations, Naval Medical Command, Washington, D.C., 1982-1983. He reported for duty as The Medical Officer of the Marine Corps in June 1983.

Commodore Cassells' military awards include the Legion of Merit, Meritorious Unit Commendation, Navy Expeditionary Medal and the National Defense Service Medal.

Commodore Cassells has been Associate Dean and Clinical Professor of Community Medicine at the University of California School of Medicine, San Diego, California. He has also held faculty appointments at the University of South Carolina and the Medical University of South Carolina.

Commodore Cassells is married to the former Judith Mary Jones of Upper Darby, Pennsylvania. They have two children, Jennifer and Caroline.



JOHN F. BEARY, III

Dr. John F. Beary, III, was appointed as the Acting Assistant Secretary of Defense (Health Affairs) in September 1981, following his appointment as Principal Deputy Assistant Secretary in June 1981.

Dr. Beary's association with the military services began in 1965 as a member of the Air Force ROTC while attending the University of Notre Dame. He graduated in 1969 with a Bachelor of Science degree, summa cum laude. Graduating from Harvard Medical School in 1973 and interning at Johns Hopkins Hospital the following year, he went on to service with the Special Air Missions Squadron, Andrews Air Force Base, as Flight Surgeon and Chief of Flight Medicine until 1977. Dr. Beary then did his residency training in Osler Medical Service, Johns Hopkins, Baltimore, MD. with an elective period at Radcliffe Hospital, Oxford University, England, and later served as a Rheumatology Fellow, Hospital for Special Surgery (New York Hospital - Cornell). While a resident at Johns Hopkins and Rheumatology Fellow at the Hospital for Special Surgery, he served in the Maryland and New York Air National Guard, respectively. In 1980, he became an Assistant Professor of Medicine, Georgetown University.

Dr. Beary has pursued active membership in a number of national professional organizations, including the American College of Physicians (Fellow), the American Medical Association, the American Rheumatism Association, the Association of Military Surgeons of the U.S., and the Reserve Officers Association. He has also authored and co-authored many professional journal articles and a book and has served on several national committees, notably the National Arthritis Advisory Board and the National Health Policy Steering Committee.

Dr. Beary is married to the former Bianca Mason. They have two children: John Daniel and Vanessa.



ADDRESS

DR. JOHN F. BEARY, III

THE ACTING ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS)

8 JUNE 1983

MEDICAL READINESS

IT IS INDEED AN HONOR TO BE HERE TODAY AND TO HAVE THE OPPORTUNITY TO ADDRESS A GROUP OF OFFICERS SO DIRECTLY INVOLVED IN THE MOST IMPORTANT MISSION OF MILITARY MEDICINE: MEDICAL READINESS. I AM GOING TO BEGIN WITH A REVIEW OF THE HISTORICAL REASONS WHY WE SHOULD ALL FEEL A PARTICULAR SENSE OF URGENCY REGARDING OUR CURRENT STATE OF MEDICAL READINESS, AND, USING THAT HISTORY AS CONTEXT, LAY OUT THE STEPS WE MUST TAKE AND ARE TAKING TO ACHIEVE SATISFACTORY READINESS.

THOSE IGNORANT OF HISTORY ARE PRONE TO ASSUME THAT WE NEED MAKE NO GREAT EFFORT IN PEACETIME TO ACHIEVE MEDICAL READINESS - THAT WE HAVE ALWAYS MANAGED QUITE WELL BY MOBILIZING OUR MEDICAL ASSETS AFTER CONFLICT HAS BEGUN. WE KNOW BETTER. HISTORY SHOWS THAT WHERE MILITARY MEDICINE HAS SUCCEEDED IT HAS DONE SO ONLY BY MOBILIZING ITS RESOURCES WELL IN ADVANCE OF WAR, AND THAT WHERE IT HAS FAILED - AND IT HAS SOMETIMES FAILED CRIMINALLY - IT HAS BEEN BECAUSE IT DID NOT RECOGNIZE THE COMING NEEDS.

LET ME CONTRAST OUR WORSE FAILURE - THE CIVIL WAR - WITH OUR PROUDEST SUCCESS - WORLD WAR II. IN THE CIVIL WAR, THE UNION ARMY LOST MORE MEN THAN THE ARMY HAS LOST IN ANY OTHER CONFLICT: 115,000 BATTLE DEATHS AND 245,000 DEATHS FROM DISEASE AND INJURY, FOR A TOTAL OF 340,000. THE DEATH RATE WAS 109.5 PER THOUSAND PER YEAR. THE MOST DAMNING STATISTIC WAS THE RATE OF HOSPITAL DEATHS FROM WOUNDS: 45,000 OF THE 318,000 MEN WOUNDED DIED, OR 14.1%. OF ALL THOSE WHO DIED OF BATTLE INJURIES, 39% DIED IN THE HANDS OF MEDICAL DEPARTMENT. THE COMMITTEE ESTABLISHED TO REVIEW THE PERFORMANCE OF THE ARMY MEDICAL DEPARTMENT HAD THIS TO SAY OF THE SURGEON GENERAL:

"IT IS CRIMINAL WEAKNESS TO INTRUST SUCH RESPONSIBILITIES...TO A SELF SATISFIED, SUPERCILIOUS, BIGOTED BLOCKHEAD, MERELY BECAUSE HE IS THE OLDEST OF THE OLD MESSROOM DOCTORS OF THE FRONTIER GUARD OF THE COUNTRY. HE KNOWS NOTHING AND DOES NOTHING, AND IS CAPABLE OF KNOWING NOTHING AND DOING NOTHING, BUT QUIBBLE ABOUT MATTERS OF FORM AND PRECEDENT."

THESE REMARKS WERE OCCASIONED BY THE SURGEON GENERAL'S REQUEST, IN THE FACE OF THE CARNAGE OF MANASSAS, FOR ONLY 40 PHYSICIANS AND 50 CADETS TO AUGMENT THE PATHETICALLY INADEQUATE RESOURCES OF THE ARMY MEDICAL DEPARTMENT. IN FACT, NOT ONLY DID THE ARMY FAIL TO PREPARE FOR THAT WAR; IT FAILED TO CORRECT ITS ERRORS DURING THE EARLY STAGES OF THE WAR. A HISTORY OF THAT TIME, DOCTORS IN BLUE. NOTED:

"ITS 'ELDER-STATEMAN' ADMINISTRATION HANDICAPPED THE MEDICAL BUREAU WITH FAULTY ORGANIZATION AND RIGIDLY CONSERVATIVE IDEAS. YEARS OF PENURY HAS SO INURED THE ELDERLY OFFICERS TO 'DOING WITHOUT' THAT THEY KEPT STINTING ON HOSPITAL SUPPLIES, INSTRUMENTS, AND BOOKS WHEN MONEY WAS AVAILABLE. THE PUNY AMBULANCE SERVICE WAS IN CHARGE OF THE

QUARTERMASTER CORPS WHICH LIMITED ITS EFFECTIVENESS BY THE SAME SORT OF PENNY PINCHING. THERE WAS NO SYSTEM OF GENERAL HOSPITALS TO WHICH THE SICK AND WOUNDED COULD BE SENT. THE HOSPITAL ATTENDANTS WERE MEN TEMPORARILY DETAILED FROM THE RANKS, WHO KNEW NOTHING ABOUT THEIR WORK AND WERE RETURNED TO THEIR REGULAR DUTIES BEFORE THEY COULD LEARN."

CONTRAST THAT PERFORMANCE WITH THE ARMY'S MEDICAL MOBILIZATION FOR WORLD WAR II: IN JUNE 1939, 1100 PHYSICIANS AND A TOTAL MEDICAL DEPARTMENT OF 11,500 SUPPORTED AN ARMY OF 189,000 MEN: BY DECEMBER 1941, 11,000 PHYSICIANS AND A MEDICAL DEPARTMENT OF 132,000 SUPPORTED AN ARMY OF 1.7 MILLION: AND IN JULY OF 1945, 48,000 PHYSICIANS AND A DEPARTMENT OF 660,000 SUPPORTED AN ARMY OF 8 MILLION.

THE RECORD OF UNITED STATES MEDICINE IN WORLD WAR II IS NOT WITHOUT BLEMISH. WE WERE SLOWER TO MOBILIZE EQUIPMENT THAN PERSONNEL, AND WE RE-LEARNED, AT THE COST OF OUR PATIENTS, MANY LESSONS THAT HAD BEEN CLEARLY TAUGHT IN WORLD WAR I - FOR EXAMPLE, THE IMPORTANCE OF DELAYING PRIMARY CLOSURE OF WOUNDS. BUT THE RECORD IS AN ENVIABLE ONE: FOR THE FIRST TIME IN HISTORY, BATTLE DEATHS, OF WHICH THERE WERE 237,000, EXCEEDED DEATHS FROM DISEASE AND INJURY, OF WHICH THERE WERE 65,000. THE RATE OF HOSPITAL DEATHS FROM WOUNDS (27,000 DEATHS AMONG 600,000 WOUNDED) WAS ONLY 4.5%. OF ALL THOSE WHO DIED OF BATTLE INJURIES, ONLY 11% DIED IN THE HANDS OF MEDICAL DEPARTMENT COMPARED TO THE 39% CIVIL WAR RATE I CITED A MOMENT AGO. BUT TO ACHIEVE THIS STANDARD OF PERFORMANCE IT WAS NECESSARY TO MOBILIZE THE ENTIRETY OF THE NATION'S MEDICAL RESOURCES, AND, IN FACT, TO CREATE NEW RESOURCES. FOR EXAMPLE, BEFORE THE WAR ALMOST ALL SURGICAL INSTRUMENTS WERE IMPORTED FROM GERMANY: THE SOLUTION TO THIS PROBLEM WAS PART OF THE GREAT SAGA OF AMERICAN INDUSTRIAL MOBILIZATION BETWEEN 1939 AND 1945.

THE LESSON OF WORLD WAR II IS CLEAR: HAD WE NOT HAD TWO YEARS TO MOBILIZE, AND HAD WE NOT USED THEM WELL, WE WOULD NEVER HAVE BEEN ABLE TO PROVIDE OUR FORCES WITH ADEQUATE MEDICAL SUPPORT. THE QUESTION IS, HOW WOULD WE DO TODAY?

I HAVE TESTIFIED TO THE CONGRESS THAT IF THE UNITED STATES WENT TO WAR TODAY IN EUROPE, IN KOREA, OR IN SOUTH-WEST ASIA, WE COULD PROVIDE BATTLEFIELD SURGICAL CARE TO FEWER THAN TWO IN TEN OF OUR CASUALTIES BECAUSE WE LACK THE REQUIRED DEPLOYABLE MEDICAL SYSTEMS. MOREOVER, WE HAVE SEEN IN NUMEROUS MOBILIZATION EXERCISES THAT EVEN IF WE LENT OUR ENTIRE NATIONAL EFFORT TO RELIEVING THESE AND OTHER CRITICAL MEDICAL SHORTFALLS, IT WOULD TAKE AT LEAST EIGHTEEN MONTHS TO ACQUIRE THE FIRST SIGNIFICANT INCREMENTS TO OUR MEDICAL CAPABILITIES. GENERAL STILWELL, THE DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY, SUMMED UP THIS PROBLEM DURING EXERCISE PROUD SABER BY CALLING IT A "WAR-STOPPER". THAT IS NO EXAGGERATION: THE EXPECTATIONS OF AMERICANS ARE SUCH THAT WE CANNOT COMMIT OUR FORCES TO COMBAT AND KEEP THEM THERE UNLESS WE SUPPORT THEM MEDICALLY.

SO HERE WE ARE. REPHRASED, THE QUESTION BEFORE US IS, WHAT MUST WE DO TO ATTAIN READINESS, AND HOW QUICKLY CAN WE DO IT? WE MUST DO THREE THINGS:

WE MUST PROCURE DEPLOYABLE MEDICAL SYSTEMS AND ENSURE THEIR WARTIME AVAILABILITY WHEN AND WHERE THEY ARE NEEDED; WE MUST PROVIDE A TOTAL FORCE CAPABLE OF MANNING A WORLDWIDE WARTIME MEDICAL STRUCTURE; AND WE MUST TRAIN THAT FORCE IN PREPARATION FOR ITS MISSION.

SINCE 1980, WHEN THE WARTIME MEDICAL POSTURE STUDY CONFIRMED THE GRAVITY OF OUR SHORTFALLS IN DEPLOYABLE MEDICAL SYSTEMS, WE HAVE DEVELOPED MAJOR PROGRAMS WHICH, WHEN CARRIED TO COMPLETION, WILL PROVIDE A MINIMALLY ADEQUATE WARTIME THEATER MEDICAL STRUCTURE. THE JANUARY FIVE YEAR DEFENSE PLAN PROVIDED OVER \$2 BILLION FOR WARTIME MEDICAL SUPPORT, INCLUDING THE FUNDS PROGRAMMED FOR HOSPITAL SHIPS, NAVY FLEET HOSPITALS, ARMY COMBAT ZONE MEDICAL SUPPORT, AND AIR FORCE 500-BED HOSPITALS. WE CAN THUS LOOK FORWARD TO AN ENORMOUS INCREASE IN OUR DEPLOYABLE MEDICAL STRUCTURE.

OUR PERSONNEL PICTURE IS LIKEWISE IMPROVING: RECENT INITIATIVES IN THE RESERVE PROGRAMS OF ALL OF THE SERVICES OFFER THE FIRST PROMISE THAT WE WILL BE ABLE TO MEET THE WARTIME REQUIREMENTS FOR SURGEONS, ANESTHESIOLOGISTS, AND OTHER SPECIALTIES. IN ADDITION, THE READINESS OF THE TOTAL FORCES IS IMPROVING. THE COMBAT CASUALTY CARE COURSE CONSTITUTES THE FIRST MAJOR STEP TOWARD WHAT I TRUST WILL BE A COMPREHENSIVE TRAINING PROGRAM IN WARTIME SKILLS FOR ALL CORPS COMMUNITIES IN EACH OF THE SERVICES; IT CERTAINLY IS BOTH A VERY PRACTICAL AND A HIGHLY SYMBOLIC STEP TOWARD THE CREATION OF A CADRE OF READINESS-ORIENTED MILITARY MEDICAL PROFESSIONALS.

OUR CURRENT READINESS STATUS, THEN, IS BEST CATEGORIZED AS CRITICAL, BUT IMPROVING. I BELIEVE THAT THE COUNTRY OWES A GREAT DEBT OF GRATITUDE TO THOSE LIKE YOURSELVES WHO HAVE LABORED LONG AND HARD TO SUPPORT THE OPERATIONAL FORCES WHILE THE NATION SLOWLY CAME TO REALIZE THE DESPERATE STATE OF OUR MEDICAL READINESS. BELIEVE ME, I KNOW THAT IT IS ONLY THROUGH YOUR EFFORTS AND THOSE OF YOUR JUNIORS THAT WE CAN EVER HOPE TO PROVIDE ADEQUATE WARTIME SUPPORT. THIS FACT WAS BROUGHT HOME TO ME STRIKINGLY LAST YEAR, WHEN I VISITED OUR FORCES IN THE PACIFIC, AND MET ONE OF YOUR JUNIOR COLLEAGUES, LT. PETER WOLFF, WHO WAS THEN SERVING AS THE BATTALION MEDICAL OFFICER OF THE 7TH COMMUNICATION BATTALION, THIRD MARINE DIVISION. DURING MY CONVERSATION WITH HIM IT BECAME CLEAR THAT HE HAD BECOME INVOLVED IN HIS OPERATIONAL DUTIES IN A FAR DEEPER WAY THAN HE HAD ANTICIPATED WHEN HE WAS FIRST ASSIGNED TO THE FLEET MARINE FORCE. HE HAD JUST COMPLETED A FIELD TEST OF HIS BATTALION AID STATION, WHICH REVEALED CRITICAL SHORTAGES OF ESSENTIAL SUPPLIES IN THE AUTHORIZED MEDICAL ALLOWANCE LIST THAT WAS TESTED. I AM AWARE THAT THESE PROBLEMS ARE WELL RECOGNIZED AND ARE BEING SOLVED - WHAT IMPRESSED ME WAS LT. WOLFF'S GROWING DEDICATION TO

OPERATIONAL SUPPORT AND RECOGNITION THAT THE MILITARY PHYSICIAN'S RESPONSIBILITIES EXTEND FAR BEYOND THE PEACETIME PROVISION OF HEALTH CARE TO A FUNDAMENTALLY HEALTHY ACTIVE DUTY POPULATION.

AGGRESSIVE, ENTERPRISING OFFICERS LIKE LT. WOLFF CAN BE FOUND IN EVERY SERVICE, IN EVER-INCREASING NUMBERS. IT IS A TRIBUTE TO THE DEDICATION AND LEADERSHIP OF PROFESSIONALS LIKE YOURSELVES THAT SO MANY OF THESE YOUNG PHYSICIAN ARE COMMITTING THEMSELVES TO CAREERS WHICH WILL FOSTER AND CONTINUE THE TRADITIONS YOU HAVE ESTABLISHED. I ASSURE YOU THAT YOUR EFFORTS TOWARD MEDICAL READINESS HAVE, AND WILL CONTINUE TO HAVE, THE FULL SUPPORT OF MY OFFICE.

ADMIRAL ZIMBLE, THANK YOU AGAIN FOR THE OPPORTUNITY OF BEING HERE TODAY, AND MAKING THESE REMARKS.

IN CLOSING, I WOULD LIKE TO RECOGNIZE THE EXTRAORDINARY CONTRIBUTIONS THAT YOU PERSONALLY HAVE MADE TO MEDICAL READINESS DURING YOUR TOUR AS MEDICAL OFFICER OF THE MARINE CORPS, AND TO WISH YOU CONTINUED SUCCESS IN YOUR PROSPECTIVE CAPACITY AS CINCLANT SURGEON. WERE IT NOT FOR YOUR EFFORTS AS CHAIRMAN OF THE FIELD MEDICAL SYSTEMS STANDARDIZATION STEERING GROUP, WE COULD NOT HAVE EXPECTED THE CONGRESS TO FUND THOSE SYSTEMS, AND OUR DEARTH OF CAPABILITY WOULD PERSIST INDEFINITELY. THE FLEET MARINE FORCE, THE FLEET, AND YOUR SISTER SERVICES OWE YOU A DEBT OF GRATITUDE.

THANK YOU.



JAMES F. GOODRICH

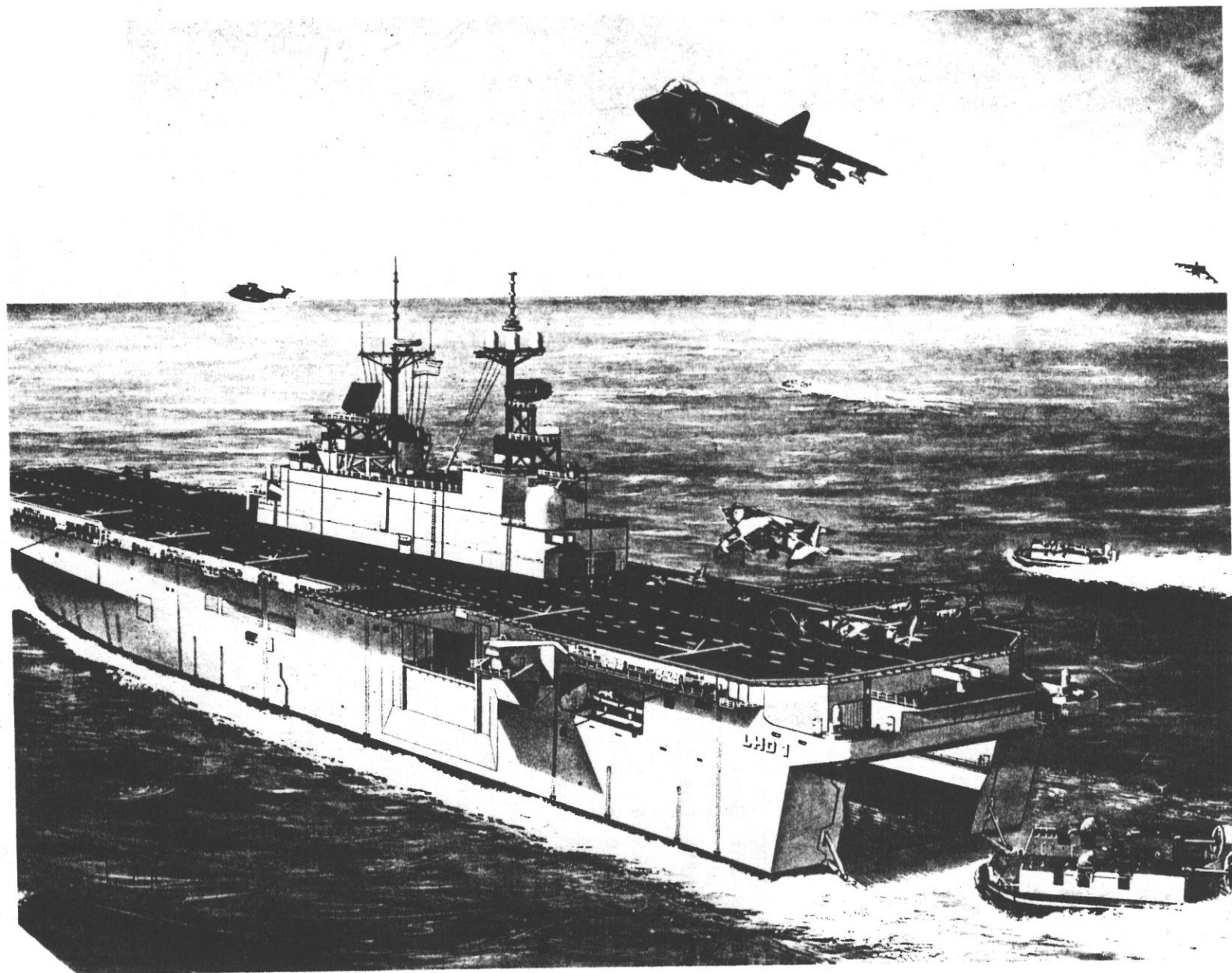
Mr. James F. Goodrich was nominated as Under Secretary of the Navy by the President on September 9, 1981, was approved by the Senate on September 25, 1981, and took the oath of office on September 29, 1981.

For nearly 45 years, Mr. Goodrich has had a professional involvement and personal commitment to the development of the Nation's maritime posture. His long career in the maritime industry began soon after he graduated from the University of Michigan in 1937, with a Bachelor of Science degree in Naval Architecture and Marine Engineering. He joined the Merchant Marine and, from 1937 to 1939, served in various capacities, becoming a Licensed 2nd Assistant Engineer, Unlimited. In 1939 he began his career in shipbuilding as a marine engineer and machinist with Bethlehem Steel Company at Sparrows Point, Maryland. In 1940 he became Chief Naval Architect and Marine Engineer for the Todd Pacific Shipbuilding Company in Tacoma, Washington, remaining with Todd throughout World War II. In 1946, Mr. Goodrich left Todd to co-found Deep Sea Trawlers, Inc., a company that pioneered the Alaska King Crab Industry. Returning to Todd in 1948, he served for ten years as the Assistant General Manager and General Superintendent of Todd's Seattle, Washington Shipyard. In 1958 he became General Manager of Todd's Los Angeles Shipyard.

In 1964, Mr. Goodrich joined Bath Iron Works Corporation as Executive Vice President. In 1965 he became President and Chief Executive Officer and served in that capacity until 1975 when he was named Chairman of the Board until 1978 when he retired.

Mr. Goodrich is a member or former member of several national organizations including the Department of Defense Industry Advisory Council, the Maritime Transportation Research Board of the National Academy of Sciences, the U. S. Naval Institute, the Propeller Club of the U. S., the Navy League of the U.S., and the American Society of Naval Engineers. He has held several top posts with the Society of Naval Architects and Marine Engineers, and is a former Vice President and Director of the Shipbuilding Council of America. In 1973, Bowdoin College awarded Mr. Goodrich an honorary L.L.D.

Mr. Goodrich is married to the former Helen Poe of Tacoma, Washington. They have three children: James P. Goodrich of Vashon Island, WA; Dr. John F. Goodrich of Portland, ME; and Nancy McGraw of Darien, CT.



ADDRESS

THE HONORABLE JAMES F. GOODRICH

THE UNDERSECRETARY OF THE NAVY

7 JUNE 1983

IT'S A GREAT PLEASURE FOR ME TO BE ABLE TO JOIN YOU TODAY AT YOUR CONFERENCE -- AND TO HAVE THE OPPORTUNITY TO PASS ALONG MY THOUGHTS ON SOME MEDICAL TOPICS WITH WHICH I HAVE BEEN SIGNIFICANTLY INVOLVED. THANK YOU FOR YOUR CONSIDERATION IN INVITING ME.

ALMOST TWO YEARS AGO I GOT MY FIRST LOOK AT THE NAVY'S MEDICAL PROGRAM. MY IMMEDIATE CONCLUSION WAS THAT OUR MEDICAL LEADERS HAD LOST THEIR FOCUS ON THE SINGLE MOST CRITICAL CONTRIBUTION THAT NAVY MEDICINE MUST MAKE TO THE NAVY AND MARINE CORPS -- AND TO THE NATION'S FUNDAMENTAL SECURITY GOALS -- NAMELY, THE PRESERVATION OF HIGHLY-TRAINED COMBAT-READY SAILORS AND MARINES. I BELIEVE WE CAN NOW SAY THAT THIS PRIMARY MISSION IS AGAIN IN THE FOREFRONT OF THEIR ATTENTION -- AT LONG LAST.

WE ALL REALIZE THAT TO ACCOMPLISH THE NAVY'S MEDICAL MISSION, WE MUST MAINTAIN AN EXPERT PATIENT CARE CAPABILITY -- MOBILE AND FLEXIBLE IN NATURE -- ABLE TO PROVIDE IN-DEPTH SUPPORT ACROSS THE WIDEST VARIETY OF POSSIBLE SCENARIOS -- A TALL ORDER. IN PEACETIME, WE MUST SAFEGUARD THE HEALTH OF NAVY AND MARINE CORPS PERSONNEL, TRAIN OUR MEDICAL PERSONNEL FOR THEIR COMBAT MISSION, AND PROVIDE COMPREHENSIVE AND COST-EFFECTIVE HEALTH CARE BENEFITS TO THE FAMILIES OF ACTIVE DUTY AND RETIRED PERSONNEL. BUT THE CAPABILITY OF NAVY MEDICINE TO SUPPORT THE OPERATING FORCES IN TIME OF WAR -- PARTICULARLY THE MARINE CORPS -- MUST ALWAYS REMAIN OUR MOST SERIOUS CONCERN.

ANY GOOD COMBAT LEADER KNOWS THAT SUSTAINABILITY IN WARTIME IS DIRECTLY DEPENDENT ON THE AVAILABILITY OF IN-THEATER MEDICAL SUPPORT. ONE OF THE NATION'S VERY FINEST COMBAT LEADERS, GENERAL BARROW, HAS CONTINUALLY STRESSED THIS - AND ALSO THE CRITICAL NEED FOR HOSPITAL SHIPS ON STATION WITH THE AMPHIBIOUS TASK FORCE -- TO DEAL WITH NAVY AND MARINE CASUALTIES REQUIRING IMMEDIATE TREATMENT.

BUT HOSPITAL SHIPS ARE ONLY ONE SUPPORTING ELEMENT IN THE CONTINUUM OF CARE REACHING FROM THE FRONT-LINE HOSPITAL CORPSMAN IN THE BATTLE AREA TO OUR STATESIDE HEALTH CARE FACILITIES. THE NATURE OF MODERN COMBAT REQUIRES CASUALTY HEALTH CARE RANGING FROM FIRST AID ON THE BATTLEFIELD TO DEFINITIVE AND RECUPERATIVE CARE AT SOPHISTICATED AND PERMANENT MEDICAL FACILITIES.

TO MEET THE NEEDS OF THIS RANGE OF SERVICES, THE NAVY IS DEVELOPING ASSETS TO MEET IN-THEATER AUGMENTATION AND MOBILIZATION REQUIREMENTS. THESE INCLUDE MOBILE MEDICAL AUGMENTATION TEAMS, A RAPIDLY DEPLOYABLE MEDICAL FACILITY, FLEET HOSPITALS TAILORED FOR THE COMBAT ZONE, AND, OF COURSE, THE HOSPITAL SHIPS.

THERE IS NO QUESTION THAT THE HOSPITAL SHIPS ARE ESSENTIAL, ESPECIALLY IN THE EARLY STAGES OF AMPHIBIOUS OPERATIONS AND PARTICULARLY IN THE ABSENCE OF A SECURE BEACHHEAD. AND THEY ARE VERSATILE ASSETS, WHICH CAN BE QUICKLY MOVED TO THE AREA OF GREATEST NEED. I AM PLEASED TO TELL YOU THAT THE DETAILED DESIGN

FOR THESE SHIPS IS ON TRACK. THE SOURCE SELECTION FOR THE FINAL CONTRACT DESIGN HAS BEGUN, AND A REPORT TO CONGRESS - ADDRESSING FINAL DESIGN CHARACTERISTICS AND COST ESTIMATES -- HAS BEEN FORWARDED. BARRING UNFORESEEN PROBLEMS, AWARD OF THE CONTRACT IS PLANNED FOR THIS NEXT MONTH.

AND THERE IS MORE GOOD NEWS. ADDITIONAL SUPPLY AND SUPPORT BLOCKS OF OUR MOBILE MEDICAL AUGMENTATION READINESS TEAMS ARE BEING SHIFTED FROM SHORE-BASED FACILITIES AND PLACED ABOARD VESSELS SO THAT THEY MAY RESPOND MORE RAPIDLY AS CASUALTY RECEIVING AND TREATMENT SHIPS. THIS ACTION IS WELL UNDERWAY -- THE MEDICAL SUPPORT FOR OUR MARINES ASHORE IN LEBANON WOULD BE AN EXCELLENT EXAMPLE -- AND IT WILL INCREASE THE MEDICAL READINESS OF OUR AMPHIBIOUS LANDING SHIPS. I SHOULD NOTE THAT LEBANON ALSO PROVIDES ANOTHER KEY EXAMPLE OF SUCCESSFUL NAVY MEDICINE - OUR PREVENTATIVE MEDICINE TEAMS ASHORE, WHOSE SUPERB FIELD SANITATION AND DISEASE CONTROL HAVE PREVENTED ANY SERIOUS LOSS OF EFFECTIVENESS DUE TO INFECTIOUS DISEASE.

PROCUREMENT OF THE NAVY RAPIDLY DEPLOYABLE MEDICAL FACILITY IS NEARING COMPLETION IN BARSTOW, CALIFORNIA. THIS HIGHLY-MOBILE AND GROUND-TRANSPORTABLE FACILITY -- WITH 1000 BEDS AND 24 OPERATING ROOMS -- IS SCHEDULED TO SHORTLY REPLACE THE LOANED ARMY ASSETS IN OUR INDIAN OCEAN PREPOSITIONED FORCES. WITHIN THE NEXT THIRTY MONTHS, WE SHOULD HAVE OUR FIRST COMBAT ZONE FLEET HOSPITALS ON BOARD -- FOUR OF THEM -- TWO WITH 500 BEDS AND TWO WITH 250. EACH WILL BE FULLY TRI-SERVICE STANDARDIZED. FISCAL YEAR 1984 PROCUREMENT WILL PROVIDE THREE ADDITIONAL COMBAT ZONE HOSPITALS -- AND 1500 MORE BEDS.

EACH OF YOU KNOWS BETTER THAN I THAT COMBAT CASUALTY CARE IS EXTREMELY MANPOWER INTENSIVE. OUR FINEST SHIPS AND WEAPONS SYSTEMS ARE WORTHLESS WITHOUT TRAINED AND DEDICATED PERSONNEL. THIS GOES DOUBLE IN MEDICINE -- WHICH IS WHY THE NEGLECT OF MANPOWER IN RECENT YEARS IN THIS CRITICAL AREA IS SO DIFFICULT TO UNDERSTAND.

THANKFULLY, WE ARE NOW BEGINNING TO REALIZE STRENGTH INCREASES FOR OUR MEDICAL PERSONNEL -- TO REVERSE THE CONCERNING TREND WHERE THE SIZE OF OUR BENEFICIARY POPULATION WAS INCREASING STEADILY WHILE OUR MEDICAL FORCE NUMBERS REMAINED ABOUT CONSTANT. BEGINNING IN FY83, WE'VE PROGRAMMED STEADY GROWTH IN BOTH OUR OFFICER AND ENLISTED MEDICAL MANPOWER. IT IS CRITICALLY IMPORTANT THAT WE MAINTAIN THAT GROWTH.

IT IS ALSO VITAL THAT WE BALANCE OUR MANPOWER INCREASES BETWEEN THE ACTIVE DUTY AND RESERVE COMPONENTS. CLEARLY, THE NAVY'S TOTAL FORCE CONCEPT MUST INCLUDE THE MEDICAL FIELD. PLANS FOR MOST CONTINGENCIES CALL FOR ACTIVE MEMBERS TO DEPLOY FOLLOWED SHORTLY BY RESERVISTS. THIS NEED -- CONCENTRATED PRIMARILY ON THE ADDITION OF MORE FLEET HOSPITALS -- IS PRIMARILY RESPONSIBLE FOR AN INCREASE IN THE TOTAL NAVAL RESERVE MEDICAL REQUIREMENTS FROM 12,000 TO 17,000 WITHIN THE DECADE.

OTHER RECENT INITIATIVES THAT FOCUS ON THE RESERVES INCLUDE THE PEACETIME INTEGRATION OF RESERVE AND ACTIVE MEDICAL UNITS -- AND INDIVIDUALS -- WHO WILL WORK TOGETHER IN CONFLICT, AND THE PROVISION OF A WIDE ARRAY OF TRAINING OPPORTUNITIES FOR OUR CRITICAL SPECIALISTS DURING THEIR INACTIVE DRILLS.

THERE ARE OTHER PROGRAMS NOW ONGOING OR IN DEVELOPMENT TO HONE THE SHARPNESS OF OUR NAVY MEDICAL TEAM UNTIL THEY ARE UNQUESTIONABLY ABLE TO CARRY OUT THE PRIMARY MISSION I DESCRIBED -- THE PRESERVATION OF OUR COMBAT READINESS.

WE HAVE TRAINED 800 PEOPLE THIS YEAR -- TRIPLE LAST YEAR'S NUMBERS -- IN THE TRI-SERVICE COMBAT CASUALTY CARE COURSE. BY NEXT YEAR, OVER 1400 NAVY MEDICAL PERSONNEL -- 1200 OF THEM PHYSICIANS -- WILL HAVE COMPLETED THAT COURSE. IN ADDITION, 214 OF OUR PERSONNEL HAVE COMPLETED SPECIAL ORIENTATION TRAINING SO THAT THE NAVY COULD PROVIDE A PORTION OF THE MEDICAL SUPPORT FOR THE RAPIDLY DEPLOYABLE JOINT TASK FORCE.

OTHER TRAINING INITIATIVES INCLUDE: AN OPERATIONAL READINESS UPDATE FOR NURSE CORPS OFFICERS, DENTAL COMBAT CASUALTY CARE, COLD WEATHER AND TROPICAL MEDICINE TRAINING, THE ARMY-SPONSORED CHEMICAL CASUALTY TREATMENT PROGRAM, AND REGULAR DEPLOYMENT EXERCISES FOR OUR MOBILE MEDICAL AUGMENTATION READINESS TEAMS.

NOW I KNOW THAT THIS SOUNDS LIKE A VERY ROSY PICTURE -- YOU, HOWEVER, IN NAVY MEDICINE KNOW THAT NOT EVERYTHING IS ALWAYS ROSY SO LET'S NOW TAKE A LOOK AT THE DARKER SIDE -- WITH EMPHASIS ON FMF REQUIREMENTS.

AS OF NOVEMBER 1982, THE PEACETIME AUTHORIZATION OF FMF MEDICAL DEPARTMENT PERSONNEL WAS 3653. BUT OUR WARTIME REQUIREMENTS EXCEED 6700. THE "CONTINUUM OF CARE" I REFERRED TO EARLIER, AN ANNUAL VICTIM OF BUDGET KNIVES, HAD BEEN BROKEN. THE CONTINUUM WAS NO LONGER REALLY A CONTINUUM AT ALL. AND BEYOND THAT, MEDICAL DEPARTMENT OFFICER DUTY WITH THE FMF HAD BEEN HISTORICALLY SOMETHING LESS THAN CAREER ENHANCING -- AND THAT MAY BE TOO KIND. THESE PROBLEMS -- COUPLED WITH A GENERAL MISDIRECTION OF MEDICAL READINESS -- WERE THE ROOT CAUSES FOR RECENT REORGANIZATION ACTIONS WITHIN THE MEDICAL DEPARTMENT.

NOR WERE THESE THE ONLY REASONS -- AND I WANT TO BE VERY CANDID WITH YOU ABOUT THIS BECAUSE ONE OF THE BEST WAYS TO AVOID REPEATING MISTAKES IS TO INSURE THAT EVERYONE IS AWARE OF WHAT THE "CORPORATE MEMORY" HAS LEARNED BY ITS PAST ERRORS. AS SOME OF YOU MAY ALREADY KNOW, NAVY MEDICINE ALSO HAD PROBLEMS IN POLICY AND DEVELOPMENT AND EXECUTION, IN MANAGEMENT'S SPAN OF CONTROL, IN COMMAND AND CONTROL OF FIELD ACTIVITIES, IN OVERSIGHT, IN MEDICAL DEPARTMENT OFFICER LEADERSHIP AND MANAGEMENT DEVELOPMENT, AND -- AS I MENTIONED -- IN ACHIEVING CONTINGENCY READINESS. THAT'S A LOT OF PROBLEMS.

TO CORRECT THESE DEFICIENCIES, A VARIETY OF BROAD POLICY CHANGES WERE ENACTED. FIRST, THE FUNCTIONS OF POLICY AND

PROGRAMMING WERE SEPARATED WITHIN THE EXECUTIVE FUNCTION. OP-093 - THE DIRECTOR OF NAVAL MEDICINE -- BECAME RESPONSIBLE FOR NAVY HEALTH CARE POLICY DEVELOPMENT, PLUS PROGRAMMING AND OVERSIGHT. THE NAVAL MEDICAL COMMAND TOOK CHARGE OF PROGRAM EXECUTION, PROFESSIONAL AND TECHNICAL GUIDANCE, AND PERSONNEL MANAGEMENT. GEOGRAPHICAL MEDICAL COMMANDS WERE ESTABLISHED TO BETTER ADMINISTER FIXED-LOCATION HEALTH CARE FACILITIES. TRAINING AND DEVELOPMENT IN LEADERSHIP AND MANAGEMENT RECEIVED MAJOR NEW EMPHASIS.

FOR THE FMF, THE REORGANIZATION MEANT ESTABLISHMENT OF A DEPUTY DIRECTOR OF NAVAL MEDICINE FOR MARINE CORPS MEDICAL MATTERS, HEAVY EMPHASIS ON OPERATIONAL READINESS AT ALL LEVELS, OP-093 SPONSORSHIP AND FUNDING RESPONSIBILITIES FOR SHIPBOARD MEDICAL EQUIPMENT, AND STRONG SUPPORT OF ACQUISITION PROGRAMS FOR DEPLOYABLE MEDICAL SYSTEMS. FOR MEDICAL DEPARTMENT OFFICERS IN THE FMF, IT MEANS ACCELERATED TRAINING IN OPERATIONAL SKILLS AND -- PERHAPS AS IMPORTANT AS ANY SINGLE CHANGE IN NAVY MEDICINE -- PROMOTION AND SELECTION BOARD PRECEPTS WHICH WILL REWARD THOSE OFFICERS ENGAGED IN OPERATIONAL DUTIES -- WHICH IS JUST AS IT SHOULD BE.

WHERE DOES ALL THIS CHANGE TAKE US -- THESE REORGANIZATIONS IN NAVY HEALTH CARE ALONG WITH THE MANY BOARD POLICY CHANGES THE REAGAN ADMINISTRATION HAS DIRECTED FOR THE NAVY IN THE PAST TWO YEARS, AS IT MOVES STEADILY TOWARD ITS GOAL OF A 600-SHIP NAVY WITHIN THIS DECADE? WHAT EFFECT WILL THOSE CHANGES HAVE ON EACH OF YOU IN THE FUTURE?

I CAN BEST ANSWER THAT BY SAYING THAT MY 70-ODD YEARS OF OBSERVING THE HUMAN CONDITION -- 40 OF THOSE INSIDE LARGE INDUSTRIAL ORGANIZATIONS -- MAKE ME FEEL VERY HOPEFUL AND VERY POSITIVE INDEED. I BELIEVE WHAT IS NOW HAPPENING IN NAVY HEALTH CARE TO BE VERY VERY PROMISING -- FOR THE NAVY AND MARINE CORPS, WHO MUST DEPEND ON YOUR SERVICES IN THE MOST TRYING AND DEPENDENT CONDITIONS -- AND FOR EACH OF YOU AS YOU FASHION A CAREER OF CHALLENGE, SATISFACTION, AND SUCCESS. AND MY HOPE IS NOT MERE WISHFUL THINKING, IT IS BASED ON SOLID FACT.

THE MEDICAL REORGANIZATION IS RAPIDLY PROGRESSING. A \$20M DEFICIT FOR FMF MEDICAL OUTFITTING WAS HALVED IN FY82. THAT DEFICIT WILL BE FULLY OVERCOME BY THE END OF THIS FISCAL YEAR. EACH MAF CAN NOW CARE FOR 20,000 CASUALTIES -- AND STATE-OF-THE-ART MEDICAL EQUIPMENT HAS BEEN ADDED TO THE INVENTORIES. AND, AS THE MARINE CORPS HAS VALIDATED ITS NEED FOR ADDITIONAL MEDICAL PERSONNEL, SECNAV HAS INCREASED END STRENGTH TO MEET THAT NEED. TWO HOSPITAL SHIPS HAVE BEEN APPROVED AND THAT PROGRAM'S CONTRACT AWARDS ARE ON SCHEDULE. THE FIRST FOUR FLEET HOSPITALS WILL BE READY FOR DEPLOYMENT IN MARCH OF 1985, AND BY 1990, WE WILL HAVE ACHIEVED OUR PROGRAMMING GOAL OF 11,250 FLEET HOSPITAL BEDS, PLUS THE 2000 BEDS PROVIDED BY THE TWO HOSPITAL SHIPS. ALL IN ALL, I BELIEVE THIS NEWS PROVIDES THE BASIS FOR A GREAT SURGE OF OPTIMISM.

I HAVE SAID MANY TIMES THAT THE 1980'S ARE A GREAT TIME TO BE IN THE NAVY AND MARINE CORPS. WE AGAIN FEEL THE STRONG SUPPORT AND ENCOURAGEMENT OF THE AMERICAN PEOPLE, THEIR SENSE OF PRIDE AND RESPECT IN THEIR UNIFORMED SONS AND DAUGHTERS. FOR THESE SAME REASONS, IT IS A GREAT TIME TO BE A PART OF NAVY HEALTH CARE -- BUT IT IS A GREAT TIME FOR OTHER REASONS AS WELL. THE PHYSICIAN'S OATH SAYS THAT "HEALING IS A MATTER OF TIME, BUT THAT IT IS SOMETIMES ALSO A MATTER OF OPPORTUNITY." IT IS OPPORTUNITY THAT THE REAGAN ADMINISTRATION'S NAVAL RECOVERY PROGRAM AND THE RECENT MEDICAL REORGANIZATION HAVE PROVIDED. I URGE EACH OF YOU TO SEIZE THAT OPPORTUNITY, AND TO EXPLOIT IT TO THE MAXIMUM POSSIBLE EXTENT. YOU, THE NAVY, AND THE MARINE CORPS ALL OF US -- WILL BENEFIT GREATLY.

PRESENTATION

"MARINE CORPS RESERVE MEDICAL SUPPORT SYSTEM"

CAPTAIN L. H. HUGHES, MC, USNR-R

DIVISION SURGEON, 4TH MARINE DIVISION

6 JUNE 1983

IN THE TIME GIVEN ME TO TALK TO YOU I HAVE DECIDED TO ANSWER ALL THE QUESTIONS YOU HAVE HAD BUT HAVE BEEN AFRAID TO ASK ABOUT THE RESERVE MARINE CORPS MEDICAL SUPPORT SYSTEM. I WILL BRIEFLY COVER THE FOLLOWING POINTS:

WHY ARE WE?

WHO ARE WE?

WHAT IS OUR STRENGTH?

HOW ARE WE ORGANIZED?

WHERE ARE WE?

WHAT IS OUR LEVEL OF TRAINING?

WHAT CAN WE DO FOR YOU?

WHAT CAN YOU DO FOR US?

LOOKING BACK AT MY ELEVEN YEARS IN THE REGULAR NAVY, I HAVE THE FEELING THAT I DIDN'T KNOW ANYTHING AT ALL ABOUT THE RESERVES EXCEPT THAT THERE WAS A VAGUE UNFAVORABLE AMBIENCE ABOUT THE WORD. I WILL ASSUME THAT YOU ARE FOR THE MOST PART IN A SIMILAR SITUATION.

WHY ARE THE RESERVES? WHAT ARE WE FOR?

THE ONE NAVY CONCEPT IS ONE ABOUT WHICH WE IN THE RESERVE COMMUNITY ALL HAVE HEARD. I'M NOT SURE THE ACTIVE DUTY NAVY HAS HAD THE SAME EXPOSURE. THIS SLIDE GIVES MY INTERPRETATION OF THAT CONCEPT.

SLIDE 1

THE ONE NAVY CONCEPT
(THE WHOLE NAVY)

THE ACTIVE DUTY NAVY

THE RESERVE NAVY

THE CIVILIAN NAVY

THIS IS A FUNCTIONAL INTERPRETATION.

SLIDE 2

MISSION STATEMENT

THE MISSION OF THE UNITED STATES NAVY IS TO
FIGHT AT SEA AND WIN.

THE CONCEPT IS THAT THE ACTIVE NAVY CAN BE EXPECTED TO WIN BATTLES, THE NUMBER OF BATTLES DEPENDING ON THE SIZE OF THE STANDING ACTIVE FORCE AND THE CASUALTY RATE. ACTIVE STANDING FORCES DO NOT WIN WARS. SOONER OR LATER THEY NEED SUSTAINING AND

REINFORCING FORCES. THAT IS WHAT RESERVES ARE FOR. THE MISSION OF THE READY RESERVE IS TO PROVIDE A TRAINED, READILY AVAILABLE, RAPIDLY DEPLOYABLE FORCE FOR THE PURPOSE OF SUSTAINING AND REINFORCING THE REGULAR ACTIVE DUTY FORCES.

WHO ARE WE?

THERE ARE THREE RESERVE MEDICAL OFFICERS HERE TODAY TO REPRESENT THE RESERVE MARINE CORPS MEDICAL SUPPORT SYSTEM. WE ARE TO A GREAT EXTENT TYPICAL. MY JOB IS THAT OF THE DIVISION SURGEON FOR THE FOURTH MARINE DIVISION. I AM AN OBSTETRICIAN-GYNECOLOGIST IN PRIVATE PRACTICE IN WALNUT CREEK, CALIFORNIA. I AM VICE-CHIEF OF STAFF OF OUR LOCAL HOSPITAL, AND CHAIRMAN OF THE QUALITY ASSURANCE COMMITTEE. AMONG OTHER THINGS I WAS THE FOUNDER OF CALIFORNIA'S FIRST FREE-STANDING SURGERY CENTER.

COMO JIM ROBERTS IS HERE FROM NEW ORLEANS. HE IS WING SURGEON FOR THE FOURTH MARINE AIR WING, AND WILL BE ONLY UNTIL HIS REPLACEMENT CAN BE PICKED, SINCE HE HAS BEEN PROMOTED OUT OF A JOB. HE IS ALSO AN OB MAN, HAS BEEN FOUNDER OF A CLINIC, IS A TRUSTEE AT THEIR HOSPITAL, AND IS OTHERWISE ACTIVE IN COMMUNITY AFFAIRS.

MORRIS KERSTEIN IS THE FSSG SURGEON. AMONG OTHER THINGS HE IS CHIEF OF VASCULAR SURGERY AT THE TULANE MEDICAL CENTER, IS ACTIVE IN COMMUNITY AFFAIRS, PUBLISHES, AND STILL HAS TIME TO BE A NEW FATHER.

THE POINT MADE IS THAT WE ARE FAIRLY TYPICAL. FRANK KEVILLE IS REGIMENTAL SURGEON FOR THE 23RD MARINES. HE IS CHIEF OF NEUROSURGERY AT THE UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO. PAUL VESCOVO, REGIMENTAL SURGEON, 24TH MARINES HAS THE VESCOVO CLINIC IN KANSAS CITY, AND IS CORONER AND DEPUTY SHERIFF IN HIS COUNTY. RALPH SMITH IS PROFESSOR OF CARDIOLOGY AT TUFTS IN NASHVILLE AND IS REGIMENTAL SURGEON FOR THE 14TH MARINES. THE BATTALION SURGEONS RANGE FROM PSYCHIATRISTS TO VASCULAR SURGEONS. ON ONE TRIP TO THE DESERT, ONE OF THE BATTALION SURGEONS WAS A MAN THAT WRITES TWO CHAPTERS OF THE STANDARD TEXT ON OPEN HEART SURGERY AND THE OTHER A PEDIATRICIAN FROM THE MIDDLE OF WISCONSIN.

THE CORPSMEN ARE EQUALLY VARIED IN BACKGROUND AND CIVILIAN OCCUPATION. THEY RANGE FROM CIVIL ENGINEERS TO PARAMEDICS.

WE ALL HAVE IN COMMON THE WILLINGNESS TO PUT TIME AND ENERGY INTO THE RESERVE PROGRAM. ONE OF THE MEN IN THE DIVISION SURGEON'S UNIT IS LOU ZURCHER -- RECENTLY APPOINTED TO AN ENDOWED CHAIR IN SOCIOLOGY AT THE UNIVERSITY OF TEXAS IN AUSTIN. LOU AND A GROUP DID A STUDY IN WHICH THEY INTERVIEWED MORE THAN 12,000 MEN AND ASKED WHY THEY STAYED IN THE RESERVES, AND WHAT MADE THEM GET OUT. HE DID THE SAME THING WITH THE REGULAR NAVY. WITH HIS DATA, I CAN TELL YOU WHY WE ARE DOING ALL OF THESE THINGS. I RECOMMEND HIS PAPERS TO ALL OF YOU WHO ARE INTERESTED IN RECRUITING AND RETENTION.

THAT'S WHO WE ARE AND TO SOME EXTENT WHY WE ARE HERE.

WHERE ARE WE?

SLIDE SHOWING LOCATIONS COVERING THE ENTIRE UNITED STATES.

WE LIVE ALL OVER THE UNITED STATES. SOME OF US DRIVE HUNDREDS OF MILES TO OUR DRILL SITES ON A 2 DAY PER MONTH BASIS. SOME OF US FLY THOUSANDS OF MILES TO DO OUR THING. THE SLIDES WILL GIVE A NOTION OF THE ORGANIZATION AS WELL AS THE LOCATIONS OF OUR UNITS. THE DIVISION IS SET UP IN A STANDARD WAY, EXCEPT THAT THE PARTS ARE DISPERSED.

SLIDE SHOWING CHIEF OF NAVAL RESERVE WIRE DIAGRAM

THE MEDICAL SUPPORT SYSTEM IS ADMINISTERED BY THE NAVY, BUT IS ORGANIZED AND FUNCTIONALLY CONTROLLED BY THE MARINES. WE HAVE SEEN THE MARINE CORPS ORGANIZATION. THE NAVY ORGANIZATION IS SEPARATE AND DISTINCT AND INVOLVES SUCH ENTITIES AS CHIEF OF NAVAL RESERVE, READINESS COMMANDS, RESERVE CENTERS, AND RESERVE UNITS. FOR ME TO GET A DOCTOR TO GO SOMEWHERE, I MUST ASK HIM TO GO. IF HE WANTS TO, HE ASKS HIS RESERVE CENTER COMMANDER IF HE MAY. THEY IN TURN ASK THE REDCOM, WHO ASKS CNAVRES. IF EVERYONE SIGNS THE CHIT, AFTER TWO MONTHS HE GETS TO DO WHAT I WANT HIM TO DO. IF I CAN STILL REMEMBER. IN SPITE OF THE SYSTEM, WE WORK QUITE WELL.

WHAT IS OUR STRENGTH?

SLIDE SHOWING ALLOWANCE OF 368 OFFICERS AND 1397 MEN, 81% AND 65% ON BOARD.

WHAT IS OUR TRAINING?

MEDICAL CORPS OFFICERS TRAINING OPPORTUNITIES HAVE RECENTLY OPENED UP AND WE FILL ALL THE SEATS WE CAN GET IN THE FOLLOWING COURSES.

- C-4 COURSE
- ATLS AND ACLS
- COLD HOT AND HIGH TRAINING COURSES
- RED FLAG -- AIR FORCE
- LFTCPAC MEDICAL STAFF PLANNING COURSE

HOSPITAL CORPSMEN -- ABILITIES ARE NOT REFLECTED IN THE NEC. WE HAVE FOR YEARS HAD RESERVE CORPSMEN GOING THROUGH THE FIELD MEDICAL SERVICE SCHOOL AND HAVE YEARS OF OJT AND STILL HAVE NOT BEEN ABLE TO GET THE 8404 NEC THAT THEY NEED TO BE "BY THE BOOK" QUALIFIED. THEY HAVE, HOWEVER, BEEN ON TRAINING DUTY WITH THE MARINES FOR YEARS, AND HAVE FUNCTIONED WELL AS FAR AS WE HAVE BEEN ABLE TO TELL. MANY OF THEM HAVE HAD COMBAT EXPERIENCE AS HOSPITAL CORPSMEN AND ARE HIGHLY QUALIFIED. WE HAVE RECENTLY DEVELOPED A SYSTEM TO FIND THOSE PEOPLE WHO ARE QUALIFIED AND GET

THE 8404 NEC ASSIGNED TO THEM. OUR PAPER WILL LOOK BETTER BY THIS TIME NEXT YEAR.

WHAT HAVE WE BEEN DOING FOR YOU ?

NOTHING! ! ! WHY? ? ?

1. YOU HAVEN'T KNOWN WE EXISTED AND SO YOU HAVEN'T ASKED.
2. WE HAVEN'T HAD OUR ACT TOGETHER WELL ENOUGH TO VOLUNTEER.
NOW MAYBE WE HAVE.

WHAT CAN WE DO FOR YOU ?

1. WE CAN FILL YOUR RANKS DURING TRAINING EXERCISES AND OPERATIONS, AND GIVE YOUR COMMANDERS A CHANCE TO PRACTICE PLAYING WITH A FULL DECK.
2. WE CAN FILL THE SEATS IN SCHOOLS THAT CAN ONLY BE GIVEN ECONOMICALLY WHEN A CERTAIN NUMBER OF PEOPLE ARE AVAILABLE TO TAKE THE COURSE.
3. WE CAN PROVIDE SPECIALIZED TRAINING IN SUBJECTS WHERE RESERVES HAVE SPECIAL EXPERTISE.
4. WE CAN DO RESEARCH AND DEVELOPMENT, AND OTHER SPECIAL PROJECTS.

WHAT CAN YOU DO FOR US ?

1. YOU CAN TRAIN US. IF YOU ARE GOING TO NEED US FOR MOBILIZATION, AND IF YOU EXPECT US TO DO YOU ANY GOOD, YOU HAD BETTER SHOW US WHAT YOU WANT US TO DO. WE CAN PRACTICE IN OUR SPARE TIME. WE WOULD LIKE TO TRAIN WITH YOU. WE WOULD LIKE OUR JUNIOR PEOPLE TO GO TO THE FIELD WITH YOU, AND OUR SENIOR PEOPLE TO PLAN WITH YOU.

2. USE US. THIS IS MUCH THE SAME SITUATION AS THE SEX COUNSELORS TALK ABOUT WITH ELDERLY PEOPLE. IF YOU DON'T USE IT, IT WILL GO AWAY. THE RESERVES, LIKE THE ELDERLY GROUP, LOVE TO BE USED.

THANK YOU FOR YOUR ATTENTION.



PRESENTATION

"MASS CASUALTY IDENTIFICATION"

CAPTAIN LOWELL J. LEVINE, DC, USNR-R

COMMANDING OFFICER, 10TH DENTAL COMPANY,
4TH DENTAL BATTALION, 4TH FORCE SERVICE SUPPORT GROUP

6 JUNE 1983

MASS CASUALTY IDENTIFICATION

THE NAVAL MEDICAL DEPARTMENT MAY BE CONFRONTED WITH THE PROBLEM OF IDENTIFYING CONSIDERABLE NUMBERS OF LIVING AND/OR DECEASED CASUALTIES IN BATTLEFIELD OR NON-BATTLEFIELD SITUATIONS.

IDENTIFICATION OF VICTIMS IS ACCOMPLISHED BY A COMPARISON OF KNOWN DATA OBTAINED FROM AN INDIVIDUAL (PRE-CASUALTY STATUS) WITH DATA OBTAINED FROM THE VICTIM. POSITIVE IDENTIFICATION IS REQUIRED FOR NOTIFICATION OF NEXT OF KIN, COMPLETION OF OFFICIAL RECORDS, SETTLEMENT OF ESTATES AND INSURANCE CLAIMS, AND COURT PROCEEDINGS.

THE MOST COMMONLY USED METHODS OF IDENTIFICATION ARE:

VISUAL

FINGERPRINTS

DENTAL

MEDICAL (INCLUDING; SKELETAL, HAIR, SEROLOGY, CYTOLOGY,
DISEASES, SCARS, DEFECTS, SURGERY, ETC.)

PERSONAL EFFECTS

EXCLUSION

THE USE OF VISUAL RECOGNITION BY FRIENDS OR RELATIVES AND THE USE OF PERSONAL EFFECTS FOR POSITIVE IDENTIFICATION ARE FRAUGHT WITH DANGER AND SHOULD BE AVOIDED. SCIENTIFIC EVIDENCE SUCH AS FINGERPRINTS, DENTAL RECORDS, MEDICAL RECORDS ARE BEST USED. EXCLUSION CAN BE USED AND AN EXAMPLE MIGHT BE AN INFANT FOUND IN AN AIR CRASH IN WHICH ONLY ONE INFANT WAS LISTED ON THE MANIFEST AND SEEN TO BE TAKEN ABOARD THE AIRCRAFT BEING IDENTIFIED AS THAT PARTICULAR INFANT.

THE "IDENTIFICATION TEAM" WILL INCLUDE FORENSIC PATHOLOGISTS, DENTISTS, PHYSICAL ANTHROPOLOGISTS, FINGERPRINT EXPERTS, RADIOLOGISTS, AS WELL AS OTHERS SUCH AS SEROLOGISTS, TOXICOLOGISTS, FORENSIC INVESTIGATORS. THEY ESSENTIALLY ARE FORMED INTO TWO TEAMS; ONE POST MORTEM, ONE ANTE MORTEM. EACH WILL ATTEMPT TO GATHER ALL AVAILABLE INFORMATION AVAILABLE.

DURING THE COURSE OF THEIR AUTOPSIES THE POST MORTEM TEAMS WILL DETERMINE SUCH THINGS SEX, RACE, APPROXIMATE AGE, DENTAL STATUS, MEDICAL STATUS, AND TENTATIVELY IDENTIFY IF PERSONAL EFFECTS ARE FOUND WITH THE BODY (TO BE CONFIRMED BY "SCIENTIFIC EVIDENCE").

THE ANTE MORTEM TEAM WILL LOCATE AND COLLECT FINGERPRINT RECORDS, DENTAL RECORDS, MEDICAL RECORDS, SEX, RACE, AGE, HEIGHT, WEIGHT, CLOTHING AND PERSONAL EFFECTS DESCRIPTIONS, TATOOS, MARKS AND SCARS, HAIR COLOR, ETC.. THIS TEAM WILL ABSTRACT INFORMATION

FROM THE EVIDENCE AS IT BECOMES AVAILABLE TO GIVE THE MOST ACCURATE COMPOSITE DESCRIPTION OF THE POSSIBLE VICTIM.

A CORRELATING FUNCTION WILL BE PERFORMED, USUALLY BY THE ANTE MORTEM TEAM, TO MATCH THE EVIDENCE FOUND BY EXAMINATION OF VICTIMS WITH THE DESCRIPTIONS THEY HAVE ACQUIRED AND A POSITIVE IDENTIFICATION SIGNED BY THE PARTICULAR EXPERT INVOLVED; E.G. DENTIST, FINGERPRINT EXPERT, RADIOLOGIST, ETC..

IN THE MILITARY SITUATION, A CLEAR CHAIN OF COMMAND MUST BE ESTABLISHED AS WELL AS THE LEGAL AUTHORITY TO SECURE THE SCENE, ORDER AUTOPSIES, SIGN DEATH CERTIFICATES, REQUISITION PERSONNEL AND SUPPLIES AND THE LIKE BEFORE THE SITUATION PRESENTS ITSELF IN ORDER TO PREVENT INITIAL CONFUSION AND LATER PROBLEMS. A WORKING AREA FOR POST MORTEM EXAMINATIONS, COMMUNICATIONS, AND LOGISTICAL SUPPORT TO SUSTAIN OPERATIONS FOR AN EXTENDED PERIOD SHOULD BE PLANNED FOR IN ADVANCE. MOST IMPORTANT IS TO REMEMBER THAT THE ENTIRE OPERATION IS FOR THE BENEFIT OF THE LIVING AND NOT THE DEAD AND THAT IT MUST BE ACCOMPLISHED WITH DIGNITY AND HUMANITY.

PRESENTATION

"THE PSYCHIATRIC EXPERIENCE OF THE ISRAELIS DURING THE 1973
ARAB-ISRAELI WAR AND THE 1982 WAR IN LEBANON"
CAPTAIN NOEL S. HOWARD, MC, USN

PSYCHIATRY CONSULTANT TO THE SURGEON GENERAL

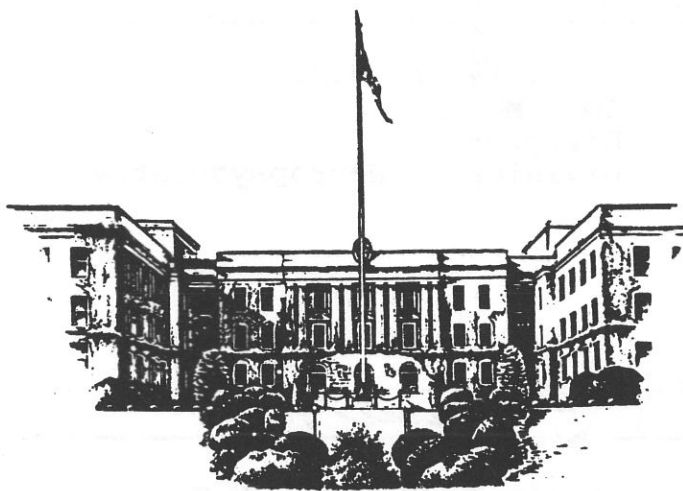
AND

DIRECTOR, HEALTH PROMOTION DIVISION, NAVAL MEDICAL COMMAND

6 JUNE 1983

(THE SUBSTANCE OF CAPTAIN HOWARD'S PRESENTATION HAS BEEN
INCORPORATED IN AND EXPANDED UPON IN A REPORT, "ISRAELI BATTLE
SHOCK CASUALTIES: 1973 AND 1982", RELEASED BY THE DEPARTMENT OF
THE ARMY. THE REPORT FOLLOWS THIS PAGE)

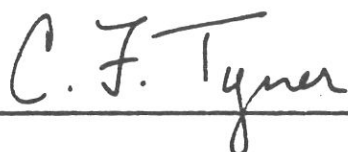
Israeli Battle Shock Casualties : 1973 and 1982



**DIVISION OF NEUROPSYCHIATRY
Walter Reed Army Institute of Research
Washington, D. C. 20307**

1983

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Report WRAIR NP-83-4

ISRAELI BATTLE SHOCK CASUALTIES: 1973 AND 1982

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PREFACE

This paper is one of a series of occasional, informal accounts of work in the Division of Neuropsychiatry at the Walter Reed Army Institute of Research. The reports generally address topics in Army preventive medicine for which implementation responsibility lies significantly outside the Medical Department. Although their contents may overlap partly with our publications in the scientific literature, most papers are based on trip reports, briefings, and consultations involving specific Army audiences. Comments to the senior author are welcome.

This work was supported by Research Area III -- Health Hazards of Military Systems and Combat Operations -- of the U.S. Army Medical Research and Development Command; MG Garrison Rapmund, Commanding.

This report is based on four visits to Israel: June 1978, June 1982, January 1983, and April 1983. The material is taken from presentations by the Israelis during the Second and Third International Conferences on Psychological Stress and Adjustment in Time of War and Peace (1978, 1983) and from discussions with psychologists and psychiatrists of the Israeli Defense Force (IDF).

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INTRODUCTION

Psychiatric casualties are a large source of manpower loss in modern warfare. They were first well described in the beginning of this century. Since then, much has been learned about the nature, prevention, and treatment of psychiatric casualties from anecdotal accounts, from trial and error clinical treatment, and from both retrospective and prospective studies. The formula of prevention based on good morale, treatment based on immediate attention near the front, and rapid return to combat duty, is a useful distillation of the experiences of the past. This may suggest, incorrectly, that everything needed is known about the nature, prevention, and treatment of combat psychiatric casualties. As conflicts become shorter, more intense, and more fluid, however, psychiatric casualties emerge more rapidly, appearing within hours after the beginning of hostilities. Treating psychiatric casualties near the front and returning them to duty becomes more difficult. The importance of combat psychiatry, while remembered in principle, tends to be forgotten in the practical business of planning for possible future wars.

The experiences of the Israelis during the 1973 Arab-Israeli War and the 1982 war in Lebanon have confirmed the basic principles of combat psychiatry. In addition, new information has emerged which refines these principles and suggests important, unanswered questions on the nature, treatment, and prevention of combat psychiatric casualties.

BATTLE SHOCK CASUALTIES DURING THE 1973 ARAB-ISRAELI WAR

Casualty Generation

The 1973 Arab-Israeli War was short and intense. It lasted approximately 4 weeks, caused heavy casualties, consumed vast quantities of military materiel, and in its early phases was fought twenty-four hours a day. Battles were mobile and fluid, with armor, infantry, artillery, and air support attempting to work in close coordination. The Israelis were taken by surprise, nearly overrun by sheer numbers of men and masses of equipment, and initially

forced to retreat. Even as they were retreating, the Israelis fought resourcefully and tenaciously with great tactical flexibility and personal initiative. Due in part to the inflexibility of their adversaries, the Israelis were able to mobilize their reserves, gain tactical initiative, and exploit it to regain their original positions.

The Israeli Defense Force (IDF) suffered a relatively high rate of psychiatric casualties (termed "battle shock" casualties in this paper) during the 1973 war. Psychiatric casualties in battle are generally expressed as a ratio of the psychiatric casualties to the wounded in action. Immediately after the 1973 war, the ratio of psychiatric casualties to wounded in action (WIA) was given officially as 14:100 or 12.5% of all non-fatal casualties. Upon reexamination, however, the Israelis found this figure low: the actual ratio was approximately 30:100, or 23% of all non-fatal casualties (Noy, personal communication). The revised figure includes those formally recorded as battle shock (the originally reported 12.5% of casualties), those not formally so recorded but nevertheless suffering from battle shock, some late reactions, and battle shock in the wounded.

Treatment and Outcome

The 1973 war was the first in which the Israelis sustained significant numbers of battle shock casualties. In prior wars, the number of such casualties had been low, treatment informal, and hence, at the time of the 1973 war, no formal doctrinal or organizational provisions had been made for the treatment of battle shock. As a result, during the 1973 war, all battle shock casualties were evacuated to the rear. Most were treated in civilian hospitals. Only a few returned to combat duty during the war. For many, recovery was slow and disability prolonged.

Post-War Analyses

The Israelis were stunned by the suddenness and intensity of the attack and by the number of physical and psychiatric casualties sustained in the 1973 war. The conflict was described by the IDF Surgeon General as a demographic disaster for Israel, because so many capable people were killed (Dolev, personal communication). The

number of battle shock casualties was high relative to the experience of the IDF in prior wars. Following the war, in cooperation with Israeli academic institutions, the IDF subjected itself to intense scrutiny. It was hampered by a lack of systematic record keeping during the war as a result of which valuable information was lost. Nevertheless, the results of this self-scrutiny led to the development of doctrine for treating battle shock casualties and for collecting better combat data. These were subsequently applied during the 1982 war in Lebanon.

Casualty Classification. The Israelis reviewed the literature on combat psychiatry and combined their own observations from the war with those of others from previous wars into a coherent clinical picture of combat psychiatric casualties (Noy 1978a). They drew a distinction between battle shock ("combat reaction" in Israeli terminology) and battle fatigue. Battle shock -- defined as a simple emotional reaction to the stress of battle -- developed after hours or days of intense combat. In contrast, battle fatigue developed after weeks or months of moderate combat. In the 1973 war and later in the 1982 war in Lebanon (see below), psychiatric casualties took the form of battle shock. Battle shock progressed through three stages. The first or immediate stage lasted hours to days and was characterized by anxiety, depression, and fear. The majority of soldiers with battle shock recovered during the immediate stage. Those who did not recover passed into the second, or acute stage, which was characterized by the emergence of neurotic symptoms consistent with the soldier's pre-war personality. This stage lasted for days to weeks and recovery was still likely. If treatment in the acute stage failed, the soldier passed into the third, or chronic stage which was characterized by personality impoverishment and chronic psychiatric disability. This stage was of extended duration and recovery was slow and often incomplete.

Delayed Battle Shock. In the 1973 war, the Israelis observed a new form of battle psychiatric casualty: delayed battle shock (Baruch, personal communication). Some soldiers who had done well during intense fighting broke down upon receiving their first telephone call from home, or broke down when home on their first leave. Delayed battle shock also emerged in another form. This other form occurred on the Suez front. Battle shock casualties on this front were evacuated initially to military hospitals in the middle of the Sinai. There, soldiers suffering battle shock rested for 2-3 days, recovered, and were ready to

return to duty. However, because no provision had been made to return them to their units, the men were then further evacuated to Tel Aviv or Jerusalem. These soldiers frequently suffered second, more serious, decompensations during the latter evacuation (Noy, personal communication).

Battlefield Factors. The Israelis observed that the intensity of fighting, more so than its duration, produced battle shock. Battle shock cases were numerous during the first hours and days of the 1973 war; and highest during the crossing of the Suez Canal when indirect fire (artillery and rockets) was the most intense. When intensity was extreme, battle shock emerged before the onset of significant fatigue or sleep deprivation. Parenthetically, even under the most severe battle conditions, Israeli soldiers appeared to manage 3-4 hours sleep in every 24. The risk of battle shock, in addition to varying with battle intensity, varied, in combat units, with the soldier's combat role. Battle shock was most prevalent in armored units, intermediately prevalent in artillery units, and least prevalent in infantry units. The high prevalence in armored units was probably a result of their being engaged in the most intense combat. Overall, reservists were more vulnerable than active service soldiers; and soldiers from support units were more vulnerable than combat troops. Thus, battle intensity, primarily, and the soldier's battle role, secondarily, were the factors related to battle shock.

Pre-War Factors. The Israelis conducted a retrospective examination of 40 IDF soldiers who suffered battle shock during the 1973 war (Noy 1978b). Each had received treatment during the acute stage of the syndrome. With regard to completeness of recovery, as of a year or two after the war, 45% had no difficulties, 31% had some difficulties, 21% had many difficulties, and 3% had severe difficulties. Thirty-five percent of the men with battle shock had been seriously wounded. In 70% of this wounded group, the physical injury was a direct cause of the battle shock. Forty percent of the men with battle shock reported minimal group cohesion and unit identification and a high incidence of interpersonal difficulties with members of their unit, contrasted with 10% in a control group of men not suffering battle shock. Prior or ongoing civil stresses were found in 80% of the cases of battle shock. Fifty percent of the battle shock cases had wives who were pregnant, or who had given birth within the year preceeding the war. In 23% of the cases, there had been a recent death in the immediate family. Other apparently relevant

civil stresses were being newly married, taking on a mortgage, having sick parents, or sustaining a serious personal loss.

In contrast to their role in causing battle shock, neither the presence nor the severity of combat or civilian stresses bore any relationship to likelihood of recovery (Noy 1978b). There was, however, a significant correlation between the likelihood for recovery and the soldier's personality. For the purposes of the study, each soldier was classified as having a stable, a transitional, or a repressed personality. Well adjusted men in untroubled life circumstances were classified as stable. Men facing developmental crises, generally in their late teens or late 30's and early 40's, were classified as transitional. Men who dealt with anger or anxiety with repression, and denied having felt anger at any time in their adult lives (self-reports confirmed through interviews with their families), were classified as emotionally repressed. As civilians, those with repressed personalities lived in communities containing large numbers of transient persons, communities in which there was significant personal and group maladjustment. These soldiers with repressed personalities had the poorest prognosis for recovery among the three personality groupings. Those with transitional personalities had a somewhat better prognosis. Those with stable personalities had the best prognosis and generally recovered from the acute stage (Noy 1978b).

The above study concluded that interpersonal difficulties within the unit and prior or ongoing civil stresses modulated the potency of battle stresses in generating battle shock. Soldiers who lacked cohesive bonds with comrades, or who had stressful home situations (for reasons ranging from recent births to recent deaths), were more vulnerable to battle shock. Personality type was not a predictor of becoming a psychiatric casualty. Once breakdown occurred, however, soldiers with better adjusted personalities were more likely to recover.

The Israelis also did a retrospective comparison of morale factors and social supports, both military and civilian, between soldiers who suffered battle shock and those who emerged from intense battle psychiatrically unscathed (Steiner and Neuman 1978). In contrast to the unscathed group, the men who suffered battle shock reported low morale, characterized by little or no identification with their unit or team, no trust in their leadership,

frequent transfer and rotation, feelings of loneliness and of not belonging to their unit, and finally, low self esteem regarding their military performance. It appeared that all of the above factors contributed to the development of battle shock. In contrast, high morale characterized by positive social support, group identification, stability of assignment, and high regard for one's work appeared to protect against battle shock even during intense fighting.

Treatment in Prior Wars. The Israelis found two treatments for battle shock described in the combat psychiatry literature. One consisted of rest and supportive psychotherapy at or near the front and a rapid return to combat duty. Supportive psychotherapy entails a brief recounting of events by the patient, coupled with reassurance from the therapist. The second treatment consisted of releasing tension and suppressed emotions through extensive conscious examination and by reliving the combat trauma in imagination, words, or action. In psychoanalytic terms, this latter treatment is called abreaction. The method of a brief rest and return to duty has been used near the front in military medical units. The method of abreaction has been used in rear areas in civilian hospitals. Until the Israeli review, no attempt had been made to integrate these two techniques and to provide differential indications for their use (Noy 1978a). The Israeli review suggested that rest and support near the front, and abreaction in the rear were appropriate therapy for different stages of battle shock. Accordingly, rest and supportive psychotherapy with rapid return to combat duty were concluded to be the treatment of choice for the immediate stage of battle shock; but if this treatment were to fail, and the person were to pass into the acute stage, then evacuation to the rear and abreaction would be indicated.

Israeli Civilian Treatment. Most 1973 battle shock casualties, whether they broke down at the front, on the way home, or at home, were treated in civilian hospitals. Treatment in a civilian hospital clearly promoted disability: soldiers on the verge of coping were undermined by the acceptance, pity, and empathy of the civilian hospital staff. These observations underscored the value of prompt, brief treatment near the front and rapid return to duty.

Heroism. The Israelis analyzed the situational and personal variables associated with heroic behavior (Gal 1978). They found no personality type prone to heroism.

Rather, they found that certain situations invariably called forth heroic behavior. Aspects of these hero-producing situations were good morale (as indicated by the presence of good leadership and strong unit cohesion) and intense combat stress. They studied 72 soldiers who received medals for valor during the 1973 Arab-Israeli War. These soldiers were compared to a control group matched by unit and rank on a variety of measures of personality, performance, and cognitive ability. In turn, each heroic act was studied for the presence or absence of a number of variables: isolation, being in command, commander present, saving the wounded, type of battle, heroic act as the result of an explicit command, being surrounded, few against many, and saving the lives of others.

Analysis of the personal characteristics of the medal recipients revealed age as the characteristic most readily distinguishing the heroes from the non-heroes: the heroes were younger. Associated findings were that the heroes were less often married, and if married less likely to have children. The heroes also showed higher intelligence, motivation, overall rating on personality factors, and higher army course scores. There were no differences in educational achievement or physical fitness.

Analysis of the situational factors revealed four clusters of situational variables associated with heroic acts. In the first cluster, the men were surrounded, outnumbered, defending, and retreating. They were acting together when the heroic act was performed. The commander was the hero, or the commander was present; the heroic act occurred while breaking out of an encirclement. In the second cluster, the men were in a face-to-face battle and the hero was saving the lives of the wounded. The commander was absent and the hero was psychologically isolated from his comrades. The hero remained alive while saving others. In the third cluster, the men were a few against the many. It was the hero's regular unit and he died saving the lives of his friends. The fourth cluster found the hero alone, fighting in an offensive battle to the last bullet. He was not under clear orders. He was not fighting to save himself or others. He died alone. Ten to twenty cases fit into each cluster. The clusters accounted for approximately two-thirds of the cases of heroism. The remaining cases were sufficiently unique that common situational factors did not emerge.

The Israelis concluded that heroes were not clearly distinguishable from non-heroes. They fell generally into the upper quartile of overall scores and test results. The heroes were generally officers or noncommissioned officers who had good, but not perfect military records. Most had shown some resistance to military authority in the form of being absent without leave, or being disciplined for breaches of military regulations, at some point in their military service. The Israelis concluded that there was no specific personality associated with being a medal recipient, and that with regard to personality "we all are at risk for heroism" (Gal 1978).

The results of the above study show that heroes are not unique. The study suggests that there are certain characteristic situations which call forth heroism. In all these situations, the heroes were involved in intense combat. In the first three of the four situational clusters, and perhaps in the fourth, key situational factors were good leadership and strong unit cohesion. Heroic soldiers were not the most obedient; some resistance to military authority appeared to foster heroic behavior. Overall, the study demonstrates that high morale as indicated by strong unit cohesion and good unit leadership calls forth the best from soldiers in combat.

Conclusions. The studies undertaken by the Israelis following the 1973 war show that battle shock can emerge very quickly if fighting is sufficiently intense; that delayed battle shock can be a significant problem; that low morale and prior or ongoing civilian stress, particularly family turmoil, can predispose to becoming a battle shock casualty; that forward treatment is likely to be more successful than rear or civilian treatment; and that morale factors such as small unit leadership and cohesion are important in maximizing performance in battle as well as in minimizing psychiatric casualties.

Plans for the Future

On the basis of the analyses of their experience in 1973, the Israelis adopted the U.S. doctrine for treating combat psychiatric casualties: a brief rest near the front with rapid return to the unit. They delineated the following principles: hold and treat briefly battle shock cases as far forward as possible. Evacuate by ground ambulance, and not by helicopter, to ensure local evacuation and to

maintain psychological proximity to the front. Organize in advance for the holding, treating, and returning to duty of battle shock cases. Inform unit commanders to expect battle shock casualties and to expect these casualties to return to the unit after brief treatment. Minimize battle shock casualties by ensuring good morale -- specifically good unit cohesion and strong leadership -- and ensuring stable family and community life. If immediate treatment near the front is unsuccessful and further evacuation is required, maximize the chance of eventual recovery and minimize the risk of chronic disability by evacuating to convalescent camps where military discipline is maintained. And finally, plan for accurate and relevant record keeping during wartime so that information can be gathered and later evaluated.

The IDF instituted several relevant organizational changes after the 1973 war. A psychiatric team was assigned to each medical battalion at the division level. This team was to provide the first echelon of treatment for battle shock. The team would hold battle shock casualties for 24 to 72 hours. A second echelon of treatment was planned to be located in military camps in Israel, away from civilian hospitals. The soldiers treated there were to wear uniforms and to conform to military discipline. Activities were to include military drill, abreactive therapy, and sports. Maximum stay was to be two weeks. These camps were to provide strong expectation of return to duty, to avoid the demoralizing effects of a permissive civilian environment, and to provide therapy in the form of abreaction. The Israelis also planned to train their psychiatrists and psychologists -- the bulk of whom were reservists -- to treat battle shock by means of brief forward treatment.

Summary

The 1973 Arab-Israeli War was the first war in which the Israelis sustained psychiatric casualties in significant numbers. These casualties emerged in the first hours and days of the fighting and where the battle was most intense. The casualties took the form of battle shock rather than battle fatigue. The Israelis were unprepared to treat these casualties. All were evacuated to the rear; many were treated in civilian hospitals; many became chronically disabled. On the basis of their experience, combined with their review of the literature, the Israelis

planned future use of the U.S. doctrine for treating battle shock: a brief rest near the front with a rapid return to the combat unit. During the war in Lebanon in 1982 these plans were put to the test.

BATTLE SHOCK CASUALTIES DURING THE 1982 WAR IN LEBANON

Casualty Generation

The 1982 war in Lebanon differed qualitatively and quantitatively from the 1973 Arab-Israeli War. The 1982 conflict was fought at the time and in the manner chosen by the Israelis. It was fought on one front. Israeli preparation was thorough. The war engaged only a portion of the IDF, and did not stress its logistic support. Reserve medical personnel, including mental health officers, received training in IDF medical doctrine and field operations prior to the war. Mental health officers were trained in the doctrine of forward treatment of battle shock casualties and practiced the application of this doctrine in medical field exercises.

For the war in Lebanon, the IDF planned three axes of northward advance -- western, along the coastal plain, central, along the spine of the Lebanon Mountains, and, if the Syrians intervened, eastern, up through the Bekaa Valley. The Syrians did engage, and the IDF fought along all three axes. The advance along the coastal plain presented the problems of military operations in urban terrain, and the advance along the spine of the Lebanon mountains and up through the Bekaa presented the problems of military operations in mountainous and broken terrain. These military operations were conducted from 6 June 1982 until the cease fire at noon on 11 June 1982. There was a further period of fighting from 21-26 June 1982, when the IDF cut the Beirut-Damascus Road. Most of the IDF casualties, including the psychiatric casualties, were sustained during these two periods of active fighting.

Despite the excellent preparation by the IDF, the war was hard fought. The Palestine Liberation Organization (PLO) units, fighting in the built-up urban areas along the coastal plain, evaded IDF envelopments, fought retrograde

actions along the western axis, and retreated with the bulk of their personnel to Beirut. The Syrian commandos in the Lebanon Mountains, supported by regular Syrian forces, blocked the IDF advance along the central axis. Syrian armored forces in the Bekaa, while sustaining heavy casualties themselves, slowed the IDF advance along the eastern axis, and caused many Israeli casualties.

During the period of June-December 1982, the IDF suffered 2600 wounded and 465 killed in Lebanon (Dolev, personal communication; Table 1). Of the wounded, 80% were evacuated past the Advanced Medical Battalion (AMB) to Israel proper. These casualties were treated in Israeli civilian hospitals. Their injuries were not necessarily severe, but in the IDF Medical Corps there is a predilection for rapid rearward evacuation -- preferably by air -- of even minor casualties to enhance the mobility of the forward medical units. This predilection for rapid rearward evacuation increased the difficulty of holding and treating psychiatric casualties forward within the division area.

During the period of June-December 1982, the IDF sustained 600 psychiatric casualties (Shipler 1983; Table 2). This figure includes battle shock (i.e., pure emotional reaction to the stress of battle); mixed syndromes (i.e. emotional reaction to the stress of battle combined with an underlying personality disorder); delayed psychiatric casualties (i.e. emotional reaction to the stress of battle and mixed syndromes following demobilization or while home on pass); and battle shock and mixed syndromes in the wounded. Overall, the bulk of the cases were battle shock. For the IDF in Lebanon, the psychiatric casualty to wounded ratio was 23:100 (in actual numbers 600:2600). During the 1973 war, the ratio was higher, approximately 30:100. It appears that for an equivalent degree of combat stress, as indicated by the relative number of wounded, psychiatric casualties were lower during the 1982 war in Lebanon than during the 1973 Arab-Israeli War.

Ten percent of all psychiatric casualties occurred among wounded soldiers (Noy, personal communication; Table 2). Psychiatric disturbances were found in both the lightly and seriously wounded. The brevity of the intense fighting in Lebanon and the rotation of soldiers out of combat after one or two battles may account for this. In the 1982 war, a wounded soldier was not much more rapidly removed from the combat zone than a non-wounded soldier:

all IDF soldiers in Lebanon were "short timers."

In addition to the psychiatric casualties at the front, psychiatric breakdown occurred in men who had been demobilized or who were home on leave (Noy, personal communication). It is customary, tactical situation permitting, to rapidly demobilize, or at least to give 48 hours home leave, to units recently engaged in difficult actions. During the fighting in Lebanon, a number of units were demobilized or received passes in this manner. Some soldiers, following demobilization or while home on pass, broke down and became psychiatric casualties. Their symptoms and signs were repetative thoughts and images of the war, and crying, loss of appetite, and sleeplessness. The soldiers were unable to account for these except, in a general way, to relate them to the war. They were referred for treatment to the IDF Mental Health Clinic in central Israel.. The soldiers' descriptions of their experiences in Lebanon invariably revealed traumatic events or sequences of traumatic events preceding the emotional turmoil. In the opinion of IDF psychiatrists and psychologists, these soldiers' emotional reactions would have been less severe had they remained with their units in Lebanon (Noy, personal communication). In their view, rapid demobilization and passes weakened soldiers' supportive ties with their units, reduced their ability to cope with their combat experiences, and thereby created psychiatric casualties of soldiers who would not otherwise have broken down. Since the majority of these soldiers were sent home because their entire unit had been demobilized, IDF mental health personnel rejected the idea that the soldiers were primarily those sent home because their commanders recognized in them the signs of incipient breakdown or that the symptoms and signs developed because the soldiers were afraid to return to the front. There were many such cases of delayed psychiatric breakdown seen at the IDF Central Mental Health Clinic.

Treatment and Outcome

Casualty Classification. The clinical symptoms reported by psychiatric casualties in Lebanon were similar to those reported by U.S. forces in World War I, World War II, and the Korean War, and by Israeli forces during the 1973 war, but different from those reported by U.S. forces in Vietnam (Bar-On et al. 1983; Tables 3 and 4). Pure battle shock was characterized by anxiety, depression, sleep

disturbance, and fear. Battle shock casualties appeared in the first few days of combat and cases continued to emerge as the fighting continued. In most cases, the soldiers who broke down had been engaged in heavy fighting and had gone without sleep for two or more days. Cases were more numerous where the fighting was intense and the physical casualties high. Tactical errors by commanders, being ambushed, or being hit by friendly fire increased the incidence of battle shock. Immediately preceding events were intense combat, seeing friends or one's own commander wounded or killed, and one's own close escape from death.

Treatment Plans. Following the 1973 war, the IDF adopted the U.S. principles of forward treatment for psychiatric casualties. Prior to the war in Lebanon, the IDF Mental Health Department planned to treat psychiatric casualties forward at the level of the Advanced Medical Battalion (AMB). Each AMB supports a division and is located from 2 to 20 kilometers to the rear of the fighting. The IDF had conducted education and training, including field exercises, for the forward mental health teams. Each five-member team consisted of one psychiatrist, one psychologist, and three other mental health officers, either psychologists or social workers. According to IDF plans, psychiatric casualties were to be seen first at the battalion aid station, and, if they required more than an hour or two of rest, then they were to be evacuated by ground ambulance to the AMB. There, the forward mental health treatment team would hold casualties 48 to 72 hours before either returning them to their units or, if they were unimproved, evacuating them further rearward. The treatment was to consist of physical replenishment (water, food, and sleep) and supportive individual and group psychotherapy. The psychiatric casualties were to be treated as soldiers, made responsible for their own maintenance, and required to keep their personal weapons.

Realization. Many cases of battle shock were sufficiently mild to be treated with an hour or two of rest at the battalion aid station and then to be returned to their units. No records were kept of these cases, and so they are not included in the statistics in this paper. The remaining cases were evacuated beyond the battalion aid station, entered into the statistical records, and treated either forward at the AMB or rearward in Israel, as will be described below.

Despite the plan for forward treatment, not all psychi-

atric casualties were treated close to the front. Some were treated in central and northern Israel. This was due to a lack of awareness on the part of battalion surgeons of the importance of forward treatment and to the general pressure they exerted for rapid rearward evacuation, and to the tactical situation in Lebanon where the military traffic moving forward along narrow roads through steep-walled valleys made local ground evacuation difficult. Evacuation from the battalion aid station for both the wounded and the psychiatric casualties was therefore frequently by helicopter. Once on board a helicopter, casualties were flown directly back to civilian hospitals in Israel, bypassing the AMB. Psychiatric casualties were evacuated with the wounded, by ground or air -- if by ground then to the AMB, if by air then to Israel. Approximately half of the psychiatric casualties reached the AMB, while half reached civilian hospitals in Israel. This assignment to air or ground evacuation was random. The IDF quickly realized that psychiatric casualties were arriving at civilian hospitals and a second echelon treatment facility was put into operation in northern Israel. Treatment teams there were organized to provide brief treatment similar to that used forward. Thus, the treatment of psychiatric casualties offered a comparison of the effectiveness of forward and rearward treatments (Noy, Solomon, and Benbenishti 1983; Table 5).

The doctrine of forward treatment applied by the IDF for the first time during the war in Lebanon proved effective. A few aggressive teams returned 95% of battle shock cases to duty with their units (Enoch et al. 1983; Noy, personal communication). The method of one of the teams is representative (Enoch et al. 1983). Initially, this team would conduct an interview to establish where the soldier had been, what he had done, and what had happened to him. This interview was oriented objectively rather than toward thoughts and feelings. The team confirmed two of the observations made in previous wars. First, thoughts and feelings inevitably followed the description of the objective events. Second, just describing what had happened clarified events and reduced the emotional turmoil. The team would allocate the next 6-8 hours of treatment to physical replenishment (water, food, and rest). Then the soldier was given useful tasks to do and invited to join in supportive individual and group psychotherapy. Next, the team arranged for comrades from the soldier's unit and for the unit commander to visit the soldier. Then the soldier himself was taken to visit the unit. In these ways, mutual confidence between the soldier and his unit was

restored. When the soldier had recovered enough to return to the unit, the team would arrange for comrades from his unit to pick him up. This team took advantage of its proximity to the front and the soldier's unit to maximize expectation that he would return and to reinforce the soldier's links to his comrades and commander. The team observed that units were happy to receive the soldier back, confirming the finding from other sources that under stress group members prefer someone they know to someone they do not know, regardless of presumed competence. With respect to themselves, the members of the psychiatric team noted that, because of their proximity to the front, they were all afraid. However, sharing the dangers of combat with the soldiers being treated reduced their reluctance to return a soldier to his unit. They noted that their fear was diminished to the degree that the AMB commander was competent in ensuring their supplies of gasoline and other essentials. When this was not the case, they became more afraid, hoarded supplies, and saw their clinical effectiveness decline. The team observed their tendency to over-identify with the soldier they were treating; to want to be the "good father", and to protect their new found "son" from harm. This difficulty was reduced through once-a-day staff meetings for the purpose of discussing cases, providing mutual support, and working through emotional conflicts (Enoch et al. 1983).

The Israelis observed that the psychiatric symptoms changed from the time the soldier broke down at the front to the time he arrived at the AMB (Bar-On et al. 1983). At the front most soldiers suffering psychiatric breakdown complained of inability to perform -- termed by the Israelis "the ticket out" of combat, while upon reaching the AMB they complained of difficulties with thoughts and feelings -- termed "the ticket in" to treatment. The Israelis concluded that severity of initial symptoms had little to do with prognosis for recovery; the most important indicator of a good prognosis was the soldier's labeling himself as healthy, taking initiative in his own care, helping others, and helping run the treatment team's area (Enoch et al. 1983).

A problem in the application of the doctrine of forward treatment during the war in Lebanon was the pressure for rearward evacuation at both the battalion aid station and the AMB. The battalion aid stations were moving frequently and as a result the battalion surgeons evacuated everyone they could, wounded or not, rearward. If evacuation was by helicopter, the casualties were flown directly back to

Israel, bypassing the AMB. Similar pressures for evacuation existed at the AMB. In one instance, a small group of psychiatric casualties at an AMB was "whisked away" by a medevac helicopter from the care of the division psychiatrist who was planning to hold them there for treatment. The IDF subsequently instituted several changes in policy. First, no helicopter pilot may accept an unwounded soldier on a medevac flight. Second, no unwounded soldier may be evacuated by either ground or air beyond the level of the AMB. Also, the Mental Health Department is conducting a series of lectures for battalion surgeons on the rationale for forward treatment of psychiatric casualties and the consequent need to interrupt rearward evacuation of these casualties. From this combination of changes in regulations and education of medical personnel, the IDF hopes that future psychiatric casualties will be held for forward treatment despite the pressure for rearward evacuation.

Outcome. For those soldiers diagnosed as psychiatric casualties and treated forward at the AMB, 75% were sent back to their units within 72 hours. Some failed to reach their units for administrative reasons, and a few relapsed, leaving a net 60% returned to duty. In contrast, for soldiers diagnosed as psychiatric casualties and treated in Israel proper, return to duty was only 40% (Noy, Solomon and Benbenishti 1983; Table 5). One rear treatment team was as successful as the average forward treatment team in returning soldiers to duty. This may show that the team's expectation to return casualties to duty is more important than simple proximity to the front. For both forward and rearward treatment, the IDF found the following factors predicted return: relative youth, being a combat soldier, and carrying a diagnosis of simple battle shock (Solomon and Noy 1983; Table 6).

The majority of psychiatric casualties occurred in combat soldiers early in the war. Six months after the beginning of the war, 100 of the 600 psychiatric casualties were still in ambulatory therapy. Of the 100, 25-30% were psychiatrically impaired to the degree that they were excused from any combat duties. Five had been discharged from the military.

Of the delayed psychiatric casualties, most were referred for outpatient psychotherapy. A few were referred to the rear treatment facility in northern Israel. Only 16% were returned to their units (Noy, Solomon and Ben-

benishti 1983; Table 5). These delayed psychiatric casualties were similar to those observed by the IDF in the 1973 war. The occurrence of delayed psychiatric casualties provides further evidence of the importance of comradeship and unit cohesion in maintaining soldier effectiveness not only before and during, but after battle as well.

Of the 600 soldiers evacuated as psychiatric casualties, 60 required further institutional treatment after 2-3 weeks of combined first and second echelon psychiatric care (Margalit et al. 1983; Table 7). Soldiers unresponsive to the brief initial treatment were sent to the Combat Fitness Retraining Unit (CFRU). The CFRU was located on the grounds of a sports institute in central Israel. The staff included psychiatrists, psychologists, social workers, and sports coaches who had worked with psychiatric casualties during and immediately after the 1973 war. The guiding idea of the CFRU was a combination of "walking and talking." The treatment program consisted of abreactive individual and group psychotherapy, individual and group sports, and combat-oriented military training. The mental health personnel and the sports coaches participated in both the psychotherapy and the physical activity. The 60 patients came about equally from regular and reserve units. The majority were from combat units. The average stay was 26 days. Only 5 patients (8%) received medication, in all cases tricyclic antidepressants. The CFRU was relatively successful. Of the regular service soldiers, 43% were returned to their units; of the reservists, 38% were returned to their units (Margalit et al. 1983a, Wozner et al., Margalit et al. 1983b, Goren et al. 1983, Nardi et al. 1983, Segal et al. 1983; Table 7). After completing treatment at the CFRU, none of the men required further institutional care, and some were well enough to return to combat duty in Lebanon.

The soldiers treated in the CFRU were given a variety of psychometric tests, including the Minnesota Multiphasic Personality Inventory (MMPI). Psychosocial histories were also taken. The test results and the psychosocial histories were given to six mental health officers who diagnosed the men with regard to psychiatric pathology. They were unaware that the histories and test results were from psychiatric casualties. These blind evaluators diagnosed 90% of the 60 soldiers as suffering from some form of character disorder (Segal et al. 1983). In contrast, the mental health officers at the front thought character disorders were present in only a small proportion of their battle shock cases (Noy, personal communica-

tion). This confirms the impression from other wars and armies that personality contributes little to the risk of breakdown in combat but substantially influences prognosis once breakdown has occurred. Thus, once they have become psychiatric casualties, soldiers with character pathology seem less likely to respond to brief forward treatment and therefore are overrepresented in the second and third echelons of treatment. A similarly poor prognosis was observed in soldiers with repressed personalities who suffered battle shock during the 1973 war (Noy 1978b).

Post-War Analyses

Breakdown Recurrence. The IDF studied the recurrence of battle shock in soldiers who had broken down in the 1973 war (Solomon, Oppenhiemer and Noy 1983; Table 8). By June of 1982, the IDF still had 600 of these cases on record. Of these 600, 40% were combat ready by IDF criteria. By comparison, of a control group of 1973 veterans, 75% were combat-ready. Thus, by June of 1982, significantly fewer former psychiatric casualties were combat ready, implying vulnerability to life stresses or chronic disability. Of the former psychiatric casualties who were combat-ready (approximately 240), 200 fought in Lebanon. The recurrence rate for this group of psychiatric casualties was 1%. The recurrence rate in the control group of 1973 war veterans was 0.5%, and the overall occurrence rate for psychiatric casualties for Israeli reservists in Lebanon was 0.67%. Thus, there was no discernable difference in psychiatric breakdown rates in Lebanon between those soldiers who had suffered previous breakdowns during the 1973 War and those who had served in the 1973 War but had not broken down. The IDF concluded that if a soldier is fit for combat duty by normal military criteria, a previous history of battle shock does not place him at increased risk for future combat-related psychiatric breakdown.

Battlefield Factors. Throughout the history of modern warfare, psychiatric casualties have risen as a function of battle stress. Battle stress is typically measured by the number of casualties per combat day. In past wars, using this measure, the greater the battle stress, the greater the number of psychiatric casualties. The IDF studied this with more precision during the war in Lebanon by defining battle stress independent of physical casualties. The IDF chose 4 battalions for a retrospective study; these four battalions fought during the early stages of the war in

Lebanon (Noy, Solomon and Nardi 1983; Table 9). The after-action reports of the 4 battalions were given to six military mental health experts for review. Each was asked to rank the battles fought on the basis of preparation, type of battle, adequacy of support, enemy resistance, and commander's relation to higher command. The experts doing the ranking were not informed of the number of physical and psychiatric casualties each battalion had sustained during the battles in question. On the basis of the rankings, the battalions were then ordered by the overall amount of battle stress they endured. There was high inter-rater reliability among the experts, with five out of the six agreeing completely. Of interest is the IDF's inclusion among the components of battle stress the trust by the battalion commander in his higher command and the degree of pressure, justified or otherwise, that he perceived receiving from his higher headquarters. The overall ranking of the battalions in terms of the amount of battle stress was then compared to the actual number of physical and psychiatric casualties sustained. The battalion ranking on the basis of battle stress accurately predicted the ranking by the physical and psychiatric casualties, and predicted the ranking by the psychiatric:physical casualty ratios (Table 9). In spite of the small sample of units involved, the data reinforce the idea that casualty rates and battlefield stress are closely related and suggest that when stress is greater, the fraction of casualties which are psychiatric is larger.

Prewar Factors. The IDF found other factors correlated with psychiatric casualty susceptibility during the war in Lebanon (Solomon and Noy 1983; Table 10). One was age. Soldiers aged 18-21 appeared the least vulnerable, and soldiers aged 26-30 appeared the most vulnerable. Other factors correlated with psychiatric breakdown were poor education, low motivation, and low intelligence, being a reservist, being of low rank, and being from a support unit. To a degree these factors were interrelated. In the IDF, low education, motivation, and intelligence lead to assignment in a support unit, and in the older soldiers these factors are associated with low rank. Also, the control group for this study were the wounded. Since the IDF places its more intelligent and well-motivated soldiers in combat units where there is a higher probability of being wounded, it is likely that wounded soldiers as a group are above the IDF average for intelligence and motivation. Thus, the above findings, with the exception of those related to age, are provisional, pending comparison of the psychiatric casualties to a control group of

age, rank, and military occupation-matched unwounded soldiers.

Morale. Morale has been described as the secret weapon of the IDF (Gal 1983). Since its creation in 1948, the IDF has stressed the importance of morale in combat and the role of policy and practice in fostering it. The 1973 Arab-Israeli War raised the IDF's awareness of the psychological aspects of combat to an even higher level. This has resulted in the rapid development of the scientific appraisal of morale, leadership, and unit cohesion, and their relationship to combat effectiveness. Since the 1973 war, the IDF has deployed psychologists at the brigade and division levels to study these factors and to give practical advice to company, battalion, brigade, and division commanders on morale and the other psychological factors important in maintaining performance in combat. In principle, prior to combat, these psychologists measure morale on a company by company basis; and during combat, they accompany brigade and division commanders, providing advice on a variety of morale factors. In practice, as the criteria for selecting these battle psychologists are stringent, there are not enough of them to serve all combat units. Even when deployed, they do not systematically survey morale in all combat companies. Despite these limitations, the IDF has done interesting studies of morale and its relationship to other personal and unit factors as described below.

Company morale correlates significantly with personal morale. In the spring of 1981, a survey was conducted of the morale of 1200 IDF combat soldiers (Gal 1983; Table 11). The purpose of this survey was to identify the components of both personal and company morale. The components of personal morale were found to be trust in the company commander, confidence in one's own skills as a soldier, one's feelings about the legitimacy of the war, trust in one's weapons, trust in one's self, confidence in one's comrades' readiness to fight, the unit's cohesiveness, and the quality of one's relationship with one's commander. Although the correlations in Table 11 are not exceptionally high, the trends appear meaningful. The IDF has found that the component of trust in one's weapons has become an increasingly important factor in personal morale over the last 3 decades (Gal 1983). Also of interest is the impression of IDF psychologists that when belief in the legitimacy of war declines, as it did in soldiers fighting in Lebanon, overall morale can remain high if soldiers maintain trust in their commanders (Gal, personal communi-

cation).

Company and personal morale and readiness correlated with several other factors. In a study conducted on 1500 soldiers during the third week of the war in Lebanon (Spektor, personal communication), the IDF found current company morale and readiness, and current personal morale, significantly correlated with company functioning during combat, company morale during combat, trust in the commander, and self appraisal as a soldier. Negatively correlated with all of the above were dysfunctions caused by fear. Uncorrelated with the above were casualties among commanders, information before and during combat, talks with commanders, and appraisal of the enemy. Thus it would appear that companies with high unit and personal morale will show high levels of trust in their commanders, will fight well, and will be less easily suppressed by enemy fire. In contrast, casualties among commanders, information supplied by commanders, or fear of the enemy have little relation to morale, to effectiveness, or to liability to suppression.

Trust in the commander depends primarily on the competence of the commander, and only secondarily on his credibility and caring for soldiers. Using data obtained from 30 platoons (approximately 300 soldiers) during the third week of the war (Kalay 1983), the IDF has refined the concept of trust in the commander, dividing it into three components: belief in the professional competence of the commander, belief in the credibility of the commander, and the perception of how caring the commander is for his soldiers. All three components are important ingredients of trust in the commander in garrison. In combat, however, belief in the commander's professional competence becomes the primary ingredient of trust. The soldier's perception of the professional competence of his commander is complex. It includes both the perception of the commander's overall professional competence, and more specifically, the perception of the care with which the commander tailors the missions he receives from higher command to the particular strengths and weaknesses of the men under his command. Additionally, the personal example of the commander -- his demonstrated confidence in himself, his soldiers, and the unit's weapons -- were important components of commander competence and hence of overall trust. Also important in commander competence were good navigational skills, prior combat experience, and following the prescribed procedures in preparing for combat. In the war in Lebanon, the IDF found that of the three factors of trust in the commander

-- professional competence, credibility, and caring for soldiers -- perception of the commander's professional competence by the soldiers under his command correlated most highly with combat effectiveness. In general, the IDF has found morale an effective predictor of unit performance in combat.

The IDF used their morale measures to study the incidence of psychiatric casualties (Spektor, personal communication). Historically, in addition to battle stress, low morale, poor unit cohesion, and weak leadership have predicted psychiatric casualties in battle. The IDF found that company morale was negatively correlated with the incidence of psychiatric casualties (Gal, personal communication; Noy, personal communication; Spektor, personal communication). However, this study has a number of methodological difficulties. Specifically, psychiatric casualties were recorded on a battalion by battalion basis, while the morale measures (when available) were done on a company by company basis; and since, in any given battalion, there are three combat companies and one support company, morale measures, in addition to being unavailable for all the combat companies, are not available at all for the support companies. Thus, the study needs to be re-done once the psychiatric casualties are analyzed on a company by company basis. Within the limitations of the method outlined above, the preliminary results indicate that the higher the morale of a unit going into combat in Lebanon, the less likely the unit was to suffer psychiatric casualties. It can be inferred from the importance that the IDF attaches to morale in active service and reserve units that high morale correlates also with increased combat effectiveness. Further, in elite Israeli forces in Lebanon (commandos and other special units), psychiatric casualties were zero in spite of the intense battles in which they participated, a finding consistent with the experience of U.S. forces in WW II.

Despite high morale and a good deal of attention given by command to morale and the factors maintaining it, the IDF still suffered relatively high rates of psychiatric casualties during the war in Lebanon. This may be for the following reasons. Fighting in urban areas posed special problems for IDF soldiers. Battle shock cases often resulted from the surprise of receiving fire from civilians (including women and children). Also, the IDF may have evacuated to the rear soldiers who had quite normal fear reactions to combat. Finally, the war in Lebanon was so brief in its active phases that all soldiers may have in

effect been "short timers" and suffered from a form of "short timer's syndrome."

SUMMARY AND CONCLUSIONS

Psychiatric casualties were a significant source of manpower loss for the IDF in the 1973 Arab-Israeli War and in the 1982 war in Lebanon. In the 4 weeks of the 1973 Arab-Israeli War, the ratio of psychiatric casualties to wounded in action was approximately 30:100. In the 1982 war in Lebanon, from June through December, the ratio of psychiatric casualties to wounded was 23:100. The majority of psychiatric casualties were cases of battle shock (pure emotional reaction to the stress of battle), but some were diagnosed as mixed syndromes, involving, in addition to battle stress, a component of character disorder. In both wars, intense battle stress was the primary cause of battle shock. In both wars, battle shock cases emerged within hours of the beginning of hostilities, and were most prevalent where the battle was most intense. In both wars, symptoms were typically anxiety, depression, fear, and sleep disturbance. These were the symptoms that were typical of the battle shock observed in the allied armies in World War I, World II, and the Korean War.

In both the 1973 and 1982 wars, most battle shock casualties occurred in combat units. As a fraction of total unit casualties, however, battle shock cases were more common in support units and among reservists. In the 1973 war, low morale and high levels of civil stress appeared to predispose to breakdown as well. In the 1982 war, low intelligence, low motivation, and poor education also may emerge (pending further analysis) as predisposing to breakdown.

The 1973 war was the first war in which the IDF sustained significant numbers of psychiatric casualties. They had no doctrine for treatment. All battle shock casualties were evacuated to the rear; only a few returned to their units during the war; many became chronically disabled. Following the 1973 war, the IDF adopted the U.S. doctrine of forward treatment. Using forward treatment, the IDF was successful in sending 75% of soldiers back to duty within 72 hours. For administrative reasons some of these

soldiers never returned to their units, and a few soldiers relapsed. Overall, 60% of psychiatric casualties were returned to combat duty following forward treatment. In comparison to forward treatment, rearward treatment was significantly less effective, returning only 40% of soldiers to their units. This contrast in effectiveness between forward and rearward treatment is consistent with the U.S. experience in World War I, World War II, and the Korean War: if a psychiatric casualty is evacuated beyond the division he is much less likely to return. In addition to forward treatment, good prognostic factors during the war in Lebanon included the psychiatric casualties labeling themselves as healthy, taking initiative during treatment, being relatively young, being from a combat unit, and carrying a diagnosis of battle shock. Of the soldiers who became psychiatric casualties in the 1973 Arab-Israeli War, those who fought in Lebanon in 1982 were at no higher risk for developing battle shock than other IDF soldiers. Of the battle shock casualties in 1982 who received forward and/or rearward treatment and failed to recover following either form of brief treatment, 90% appeared to have an underlying character disorder. This supports the finding from the 1973 war that while no particular personality is at risk for breakdown, character disorders do affect prognosis for recovery once breakdown has occurred. Nevertheless, with further treatment focused on physical and mental rehabilitation, even soldiers with underlying character disorders showed improvement so that 40% returned to their units.

After the 1973 war, the IDF deployed battle psychologists to measure morale and to advise brigade and division commanders on the factors enhancing or diminishing morale. In the 1982 war in Lebanon, as in the 1973 war, the IDF found that high unit morale correlated with increased combat effectiveness and decreased psychiatric casualty rates. In the 1982 war, trust in the commander was a major component of morale. In combat, commander competence was the major component of the trust in the commander and correlated most highly with combat effectiveness. In general, units with high morale were more combat effective and were less likely to be suppressed by enemy fire.

Table 1

PHYSICAL CASUALTIES IN ISRAELI FORCES IN LEBANON
JUNE-DECEMBER 1982

Adapted from Dolev, personal communication

Wounded in action (WIA)	2600
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80% evacuated beyond level of
medical battalion

Killed in action (KIA)	465
------------------------	-----

50% severe head injury
20% severe crush injury to body
5% for other reasons beyond help

Thus, approximately 75% were beyond help
even with the most vigorous medical
and surgical intervention

TABLE 2

INCIDENCE OF PSYCHIATRIC CASUALTIES
(BATTLE SHOCK AND MIXED SYNDROMES)
IN ISRAELI FORCES IN LEBANON
JUNE-DECEMBER 1982

Adapted from Shipler 1983;
and Noy, personal communication

Psychiatric casualties including wounded with psychiatric symptoms	600
Wounded in action (WIA) with no psychiatric symptoms	2600
Killed in action (KIA)	465
For the 1982 war in Lebanon, the ratio of psychiatric casualties (including wounded with psychiatric symptoms) to WIA	23:100
For the 1973 Arab-Israeli War, the ratio of psychiatric casualties (not including wounded with psychiatric symptoms) to WIA	30:100

TABLE 3

SYMPTOMS REPORTED BY PSYCHIATRIC CASUALTIES
IN ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

Adapted from Bar-On, Solomon, Noy and Nardi 1983

1.	Anxiety	56%
2.	Depressive affect	38%
3.5	Sleep disturbances	34%
3.5	Fear - diffuse, focused	34%
5.	Social estrangement, detachment	24%
6.	Conversion reactions	22%
7.	Crying	21%
8.5	Decreased appetite	19%
8.5	Headache	19%
11.	Exhaustion, fatigue	17%
11.	Psychomotor disturbances	17%
11.	Disturbing dreams, memories	17%
13.5	Tremors	13%
13.5	Confusion, concentration disturbances	13%
15.	Speech, communication impairment	12%
17.5	Dissociative states	11%
17.5	Irritability	11%
17.5	Explosive aggressive behavior	11%
17.5	Memory impairment	11%
20.	Noise sensitivity, startle	10%

TABLE 4

PSYCHIATRIC SYMPTOM CLUSTERS IN DIFFERENT WARS
BOTH U.S. AND ISRAELI

Adapted from Bar-On, Solomon, Noy and Nardi 1983

		U.S.		Israel	
	<u>WW I</u>	<u>WW II</u>	<u>V'NAM</u>	<u>1973</u>	<u>1982</u>
Anxiety		X		X	X
Depressive affect	X			X	X
Fear, diffuse/focused	X			X	X
Constricted affect			X		
Disturbing dreams		X		X	
Exhaustion, fatigue		X			
Decreased appetite		X			
Intestinal discomfort		X			
Headaches		X			
Startle reaction	X				
Sleep disturbance		X		X	X
Tremors	X				
Psychomotor changes	X			X	
Conversion reaction	X	X		X	X
Confusion	X				
Social detachment			X		X
Dissociation	X			X	
Antisocial			X		
Aggressive			X		
Substance abuse			X		

TABLE 5

RESULTS OF TREATMENT OF PSYCHIATRIC CASUALTIES
IN ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

Adapted from Noy, Solomon and Benbenishti 1983

(First number in each pair are total psychiatric casualties; numbers in () are pure battle shock casualties)

	<u>Returned to unit</u>	<u>Not Returned to unit</u>
<u>Forward treatment</u> (2-5 Km from the front; or on the border)		
Break occurred at the front	60% (66%)	40% (34%)
<u>Rearward treatment</u> (central and northern Israel)		
Break occurred at the front	40% (46%)	60% (54%)
Break occurred at home following demobilization or while on pass	16% (11%)	84% (89%)

By Chi Square on actual numbers, groups differ ($p \leq .0001$).

TABLE 6

FACTORS CORRELATED WITH RETURN TO DUTY
FOLLOWING PSYCHIATRIC BREAKDOWN
IN ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

Adapted from Noy and Solomon 1983

Factors positively correlated with return to duty:

Forward treatment

Younger

Being a combat soldier

Being diagnosed as suffering from battle shock

Factors showing no correlation with return to duty:

Pre-war medical history

Country of origin

Performance predictor score

Intelligence

Education

Motivation score (on induction)

Type of service (regular or reserve)

TABLE 7

COMBAT FITNESS RETRAINING UNIT (CFRU)
THIRD ECHELON OF TREATMENT
OF BATTLE SHOCK CASUALTIES IN
ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

Adapted from Margalit et al. 1983

60 patients (10% of total) were treated at the CFRU

Equally divided between reservists and regular soldiers

Most were from combat units

Stayed an average of 26 days

5 patients (8% of total) received tricyclic antidepressants

Regular service soldiers:

43% returned to original unit
57% reassigned to non-combat
unit

Reservists:

38% returned to original unit
62% reassigned to non-combat
unit

A number of soldiers went back to combat in Lebanon

TABLE 8

RECURRENCE OF BATTLE SHOCK IN
ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

After initial psychiatric breakdown in the 1973
Arab-Israeli War

Adapted from Solomon, Oppenheimer and Noy 1983

By June of 1982, battle shock cases from the 1973 Arab-Israeli War still on record	600
Combat ready by profile	40%
Recovered battle shock cases from 1973 serving in Lebanon	200
Recurrence of battle shock in Lebanon in battle shock cases from 1973	1%
By June 1982, of the control group of 1973 Arab-Israeli War veterans:	
Combat ready by profile	75%
Occurrence of battle shock in the control group of 1973 Arab-Israeli War veterans	0.5%
Overall risk of occurrence of battle shock for all Israeli reserve forces in Lebanon	0.67%

TABLE 9

BATTLE STRESS AS A PREDICTOR OF BATTLE SHOCK
ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

Adapted from Noy, Nardi and Solomon 1983

Based on the battles of 4 battalions
Battles were ranked on intensity of battle stress by the following factors:

Preparation (enemy location, mission, false alarms, training)
Battle (artillery, air attack, ambush, hostage, mine field)
Support (tactical, logistics, materiel)
Enemy resistance (strong, adequate, weak)
Trust by commander in the higher command (unjustified pressure, some pressure, adequate support)

Overall ranking of battle stress for each battalion (ranked 1-4 most to least difficult; rank given in 1st column) compared to psychiatric and physical casualties and the ratio of the two (expressed as number of psychiatric casualties per 100 physical casualties (KIA + WIA)). The overall ratio of psychiatric casualties to physical casualties (KIA + WIA) for the war in Lebanon was approximately 20:100.

	Physical Casualties (KIA + WIA)	Psychiatric Casualties	Ratio
1	36	31	86:100
2	23	9	39:100
3	10	1	10:100
4	12	0	00:100

TABLE 10

RATIO OF BATTLE SHOCK TO WOUNDED BY AGE
IN ISRAELI FORCES IN LEBANON
JUNE-SEPTEMBER 1982

Adapted from Solomon and Noy 1983

<u>AGE</u>	<u>Battle shock:wounded</u>
18-21	10:100
22-25	22:100
26-30	38:100
31-35	29:100
36-55	28:100

By Chi Square on actual numbers, groups differ ($p < .01$).

Other factors predicting breakdown (battle stress held constant; wounded soldiers as the control group):

Low education

Low motivation score (personality characteristics and attitude towards military service)

Low performance predictor score (intelligence, motivation, knowledge of Hebrew)

Reservist

Support unit

Low rank

TABLE 11
CORRELATIONS BETWEEN MORALE AND OTHER VARIABLES
IN ISRAELI FORCES
MAY 81

Adapted from Gal (1983)

Personal morale	.55	Perceived company's morale
	.32	Relations with commanders
	.36	Unit's cohesiveness
	.24	Trust in company commander
	.27	Comrades readiness to fight
	.28	Legitimacy of war
	.34	Trust in one's self
	.24	Trust in weapons
	.23	Personal competence
Perceived company morale	.55	Personal morale
	.47	Relations with commanders
	.41	Unit's cohesiveness
	.27	Trust in company commander
	.20	Comrades' readiness to fight
	.09	Legitimacy of war
	.21	Trust in one's self

N = 1200; all correlations are significant ($p < .05$)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Israeli Defense Force (IDF) first suffered psychiatric casualties (battle shock) in the 1973 Arab-Israeli War. The IDF was unprepared and evacuated these casualties to the rear; many became chronically disabled. The IDF later adopted the U.S. doctrine: prevent battle shock through good leadership, high morale, and unit cohesion; and treat these casualties with a brief rest near the front and rapid return to duty. The IDF used this doctrine in the 1982 war in Lebanon: they had about half as many battle shock casualties as in 1973, and returned 75% of the casualties to combat duty within 72 hours.		



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FOR MEDICAL COMPONENTS

1. BACKGROUND.

a. Unit commander's readiness posture is a function of many elements. The medical element is one area which is in need of evaluation to ensure that care of casualties is optimally delivered through an effective medical support system. MCCRES appears to be a method of providing commanders with a means of evaluating the readiness of his medical assets.

b. The following personnel served on the work group.

CAPT ROPER, Chairman	LCDR NEWTON
COMO(S) ROBERTS, Consultant	LCDR McCOY
CAPT HODGES, Consultant	LCDR BAKER
CAPT KERSTEIN	LCDR UPTON
CAPT HUGHES	LCDR KLOSE
CAPT HEASTER	LCDR LIBBY
CAPT SKELLY	LCDR ROMAN
CDR LUDWIG	LCDR ROBINSON
LCDR BUFFINGTON	LT FRANK
LCDR McGANN	LT GEORGE
LCDR YOST	LT TAYLOR
LCDR RAYMOND	

2. DISCUSSION.

a. The morning hours were devoted to a free flow of information and ideas, both to and from participants and from a representative of CMC. Of interest during this period was the recognition of a need for medical representation in MCCRES development and planning, plus the need to identify valid measurement criteria.

b. The afternoon session was devoted to requirements analysis. It was decided early on to review and identify tasks essential to the provision of medical support commencing with the most basic level of care, the company aid man (CAM), and progressing upward through the echelons of support normally followed by a casualty. At each level, measurable items having a potential predictive value were identified.

c. Due to the short time available for group work, only elements of the infantry platoon (the company aid man (CAM)), the battalion aid station (BAS), and medical company were discussed. Measurement criteria believed to satisfy the requirement are reflected in enclosure (1) to this report.

3. CONCLUSION. MCCRES measurement criteria are normally broad in scope, but in view of the limited number of personnel having adequate training and experience in field medical care, the recommended criteria for a medical MCCRES are necessarily provided in greater detail. The recommendations contained herein are only a beginning. They require evaluation and subsequent revision, as necessary. In the event the system proves effective for the evaluation of medical support, additional criteria must be developed for:

- a. Medical Logistics Company
- b. Group Aid Station (FSSG)
- c. Preventive Medicine Section
- d. Casualty Evacuation (both primary and secondary)
- e. The overall system (to determine total effectiveness of all units involved in working together)

4. RECOMMENDATIONS. The work group recommends that the criteria contained in the enclosure be tested and modified, and formally included in MCCRES as appropriate. If included, it is additionally recommended that:

- a. Additional criteria be developed, as experience proves desirable and practicable,
- b. A medical member of CMC's staff be identified as a medical representative in MCCRES, and
- c. All evaluations of medical support include medical members.

5. RECOMMENDED ACTION OFFICER.

Code MED, HQMC

MEASURABLE AREAS FOR MCCRES OF MEDICAL COMPONENTS

1. Company Aid Man (CAM)

- a. Buddy aid
- b. CAM survivability (poop and snoop)
- c. Employment of assets; e.g. litter teams, medical supplies, including the materiel carried by casualties.
- d. Evacuation procedures
- e. Resupply procedures
- f. Proper and effective use of communications
- g. Patient treatment, including recording thereof

2. Battalion Aid Station (BAS)

- a. Battalion Surgeon planning and participation, both in the planning process and the management of his hospital corpsmen.
- b. Point or phase of initial involvement
- c. Standing operating procedures (SOP) for the following:
 - (1) Litter team training and plan for acquisition of such teams in combat.
 - (2) BAS movement, establishment, operation, disestablishment, and relocation.
 - (3) Narcotics security
 - (4) Resupply of company aid man.
 - (5) Cover, concealment, and camouflage
 - (6) Procedures for split BAS functions
 - (7) Battalion Surgeon coordination with S-1 in casualty matters.
 - (8) Integration of BAS and battalion headquarters administrative procedures.

Enclosure (1)

- (9) Patient movement into, within, and out of the BAS.
- (10) Sanitation and preventive medicine.
- (11) Battalion Surgeon supervision of care delivered by corpsmen.
- (12) Procedures for POW casualties (intelligence, security, etc).
- (13) Plan for emergency retrograde

NOTES:

- 1. Several of the above requirements should be included in the appropriate FMFMs.
 - 2. In the case of aviation units, the SAR SOP should ensure that the HM is certified in accordance with NATOPS.
3. Medical Company
- a. Standing operating procedures to include, inter alia
 - (1) Planning
 - (2) Embarkation
 - (3) Movement to POE/staging area
 - (4) Landing
 - (5) Operations
 - (6) Decontamination procedures
 - (7) Triage, sorting, shock treatment, (provisions for and procedures for accomplishment of)
 - (8) Casualty overload
 - (9) Positive internal resupply
 - (10) Emergency blood resupply and donor control
 - (11) Provision for defense perimeter
 - b. Command and Control

Enclosure (1)

c. Markings in accordance with provisions of Geneva Convention.

d. Liaison and communication with appropriate staff sections of supported and supporting commands in planning and in operation.

e. Equipment exchange between subordinate and superior medical commands.

f. Emergency Resupply

g. Collection and disposal of human waste; e.g., blood, body parts, etc.

h. Viable internal patient flow

i. Internal Communications

j. Generator failure plan

k. G-1/S-1 casualty reporting coordination

l. Replacement patient uniform and equipment provisioning procedures

m. Use of external assets; e.g., dental personnel

Medical areas considered for future discussion:

a. MSSG/BSSG MCCRES

b. Reserve involvement in MCCRES

c. Medical element tie-in system approach

d. Hospital Company

e. Medical Battalion

f. Beach Evacuation Station (BES) MCCRES

g. Helicopter Evacuation Station (HES) MCCRES

Enclosure (1)

REPORT ON QUALITY ASSURANCE IN THE FMF

1. BACKGROUND

Quality Assurance activities within the Department of the Navy had its inception in 1972 as Medical Care Audit and Evaluation. It has evolved into a problem focused system of checks and balances which through review of care delivered, each facility has the opportunity to ensure that optimal care is provided to all patients. At this time, however, Quality Assurance activities have not been integrated into the operational medicine arena at the first echelon - the Battalion Aid Station. It is recognized and accepted that the delivery of patient care can be improved by employing quality assurance methods, procedures, and review mechanisms at the Battalion Aid Station, in garrison.

2. DISCUSSION

By letter of The Medical Officer, Headquarters United States Marine Corps, of 2 June 1983, a Quality Assurance Work Group was formed. This work group consisted of the following persons and met on 7 June 1983.

Captain B. D. Shima, MC, USN, 1st MARDIV Surgeon, Chairman
Captain M.D. Stenberg, MC, USN, 3d MARDIV Surgeon
Captain C. H. Bercier, MC, USN, 2d MAW Surgeon
Captain R. K. Ohslund, MC, USN, 3d MAW Surgeon
Captain R. D. Shivertaker, MC, USN, 3d FSSG Surgeon
Captain M. D. Kerstein, MC, USNR, 4th FSSG Surgeon
Captain L. H. Hughes, MC, USNR, 4th MARDIV Surgeon
Commander C. Greeb, MC, USN, 3d FSSG Surgeon
LCDR H. E. Yost, MSC, USN, 1st MARDIV Adm Med Off., Recorder
LCDR W. McCoy, MSC, USN, 2d FSSG Adm Med Off

This team was tasked to develop broad guidelines and protocol for implementation at the Battalion Aid Station level of Wing, Group and Division components of the U. S. Marine Corps. Participants readily accepted the challenge and voiced few objections to the application of quality assurance activities at the Battalion Aid Station level but felt that JCAH should have no involvement in matters related to operational forces or the manner of care delivery therein.

Representatives of the Navy Medical Command provided history, background, and perspective to the group endeavor, including applicable Navy handouts and publications for the group's use.

Two problems surfaced regarding program implementation during the brainstorm session. First, the recognition of a general manpower shortage which will impede on implementation

resulting from declining personnel and increased operational commitments; and second, that directives governing Navy Quality Assurance activities, as published, are not applicable to the mobile, operating forces because they apply to peacetime fixed facilities.

Work Group efforts centered around the identification of similarities of functions and activities within the Wing, FSSG, and Division Health Care Units. Identification of these similarities provided a foundation through which broad guidelines could be developed. These were developed and are presented as enclosure (1) as policies and procedures for Quality Assurance activities. As well, it was recognized that a plan for guidance should be developed. But, it is a matter which will be left to the Division, FSSG, and Wing Surgeons to devise. It was suggested that the JCAH format for ambulatory care be used as a guide to plan development.

3. CONCLUSION AND RECOMMENDATIONS

a. This work group concludes that the incorporation of the Quality Assurance activities at the Battalion Aid Stations of the Marine Corps is feasible. Such activities will enhance the ability of providers to deliver optimal medical care.

b. It is recommended that a pilot study, not to exceed twenty-four (24) months duration, be implemented to establish form and structure for a USMC Health Care Quality Assurance Program.

c. That, given available resources, the Commandant of the Marine Corps provide an additional billet designated as Quality Assurance Coordinator under the office of the respective Surgeon at the Headquarters elements for centralized coordination and Staff control.

d. That this Work Group effort be considered and accepted as valid, and enclosure (1) be approved.

4. RECOMMENDED ACTION OFFICER AND OFFICE

The Office of the Division Surgeon, First Marine Division is designated as action office and the Medical Administrative Officer as primary action officer.

PURPOSE

To establish policies and procedures for performing quality assurance activities at Battalion Aid Station within the Fleet Marine Forces.

BACKGROUND

A significant portion of the health care to active duty Fleet Marine Forces beneficiaries through the Battalion Aid Stations.

OBJECTIVE

To improve the quality of health care provided to Fleet Marine Force personnel in the Battalion Aid Station.

ACTION

Each Battalion Aid Station shall participate in Quality Assurance activities in garrison.

PROCEDURE

Battalion Aid Station shall perform Quality Assurance review separate from the Medical Center or hospital; or Area Branch Clinic.

- a) Perform reviews and complete reports applicable to service provided.
- b) Develop a written quality assurance plan outlining functions, organizational relationships, authority and reporting requirements.
- c) Establish a central committee, group or individual for coordinating and directing quality assurance activities.
- d) Conduct applicable review activities as prescribed in this memorandum.
- e) Maintain a current file of all practitioners (health) care providers) having clinic privileges and their specific delineated privileges.
- f) Maintain written reports of quality assurance activities.

Enclosure (1)

REVIEW

The following review activities apply to Battalion Aid Stations within FMF.

- a) Ancillary Service, if provided (Pharmacy, Laboratory and X-Ray.)
- b) General Ambulatory Care
 - 1) After hour treatment
 - 2) Antibiotic usage, if appropriate
 - 3) Clinical treatment of ambulatory care patients
 - 4) Waiting time during patient transfer
 - 5) Acceptability/Waiting Time/Patient Satisfaction
- c) Medical Records
- d) Patient complaints and appreciation
- e) Credentialling of FMF Physician
- f) Incident Reporting

REPORTING

Each FMF Unit Battalion Aid Stations that performs quality assurance reviews, shall submit a written report under the guidance of the Senior Medical Officer (Division Surgeon, FSSG Surgeon and Wing Surgeon) to a quality assurance designated officer. A quality assurance committee structure shall be established for information and data gathering, for review follow up, feed back and appropriate action and it shall be problem-oriented in nature.

Enclosure (1)

PREVENTIVE MEDICINE PROGRAM ORGANIZATION

1. BACKGROUND AND DISCUSSION.

a. Historically, occupational health and preventive medicine support of the FMF in garrison has been a joint cooperative effort between host bases, FMF tenant units, and Naval Regional Medical Centers (NRMCS). In some cases it is done by ordering FMF preventive medicine personnel to the supporting NRMC where they perform their duties except when recalled for operations or exercises with the FMF, while in others it is done separately (i.e., Division, Force Service Support Group, and NRMC) according to an agreed division of responsibilities.

b. The common goal shared by the tenant FMF units, host base, and the supporting NRMC is to provide optimum occupational health and preventive medicine support to all concerned. Taking precedence over this, when necessary, is the singular requirement of the FMF units to be prepared to meet operational requirements.

c. Options Examined. The following options for supplying in garrison preventive medicine support were examined.

(1) Consolidation of all preventive medicine assets with the NRMC preventive medicine service to conduct a centralized preventive medicine program in support of the NRMC, FMF and base. Rejected, due to surrendering too much control of FMF assets, lack of assurances as to FMF influence over goals and priorities and loss of FMF identity.

(2) Retention of separate FMF and NRMC preventive medicine assets with each conducting a coordinated preventive medicine support program. Accepted.

(3) FMF and NRMC retain all their own preventive medicine assets and conduct separate, independent programs. Rejected, due to total lack of coordination implied.

(4) Develop a MAF level preventive medicine organization to incorporate all geographical preventive medicine assets and missions (FMF and shore activities) to provide preventive medicine support to all concerned. Rejected, as incompatible with basic concepts of shore establishment support responsibilities.

(5) Consolidation of all preventive medicine assets with the FMF preventive medicine section to conduct a centralized preventive medicine program in support of all concerned. Rejected, due to feeling that guarantees of continued shore establishment funding and equipment support would be questionable.

(6) Consolidate with existing Navy Environmental and Preventive Medicine Units which report to and are controlled by the Navy Environmental Health Center. Rejected, due to problems of control, FMF identity and current uncertainty as to Preventive Medicine Shore establishment structure (NEHC vs geographic commands).

2. RECOMMENDATIONS AND CONCLUSIONS.

a. The second option appears to offer the greatest benefits to all concerned and was accepted by the group. This option meets the criteria that FMF personnel must retain their identity and that the organization continue to function in the face of deployments/mobilization.

b. The following specific points should be made: That the FMF units retain preventive medicine sections, and importantly, that there be very explicit and definite interservice support agreements/memoranda of understanding developed locally to delineate specific respective responsibilities of the FMF and the supporting NRMC using the FMF mission as the base upon which to establish priorities. That copies of ISSA/MOV be forwarded to HQ USMC (Code MED) for information.

3. LIST OF WORK GROUP PARTICIPANTS.

CAPT McALLISTER
CAPT OSHLUND
CAPT BERCIER
CAPT CHANEY
CAPT FERRIS
CAPT HAIN

CAPT(S) SHIVERTAKER
CDR PARSONS
LCDR BREAUD
LCDR MORTON
LT TAYLOR

REPORT ON TRAINING OF NAVY MEDICAL DEPARTMENT PERSONNEL

1. BACKGROUND AND DISCUSSION.

a. The work group consisted of the following personnel.

CAPT HODGES	LCDR RAYMOND
CAPT McALLISTER	LCDR ROBINSON
CAPT ABBOTT	LCDR NEWTON
CAPT HEASTER	LCDR BARTON
CAPT HAIN	LCDR BAKER
CAPT REEVES	LCDR BUFFINGTON
CAPT SKELLY	LCDR RYAN
CAPT FERRIS	LCDR ROACH
CDR CRIM	LCDR KLOSE
CDR COXE	LCDR MORTON
CDR McCARTY	LT FRANK
CDR LOOS	LT GEORGE
CDR SIDES	LT LUNDGREN
CDR HART	LT CAIN
CDR PARSONS	Ms. SALTMAN
CDR COLE	

b. The work group was charged with determining the training requirements for Navy Medical Department Officer personnel prior to assignment with the Fleet Marine Force (FMF). The who, what type of training, how long, priority of training, documentation of training and subspecialty coding of specific billets were discussed.

c. The frequency of training or requirement for refresher training was discussed briefly but was deferred to the next FMF Medical Department Officer's Conference for consideration pending acceptance and implementation of initial training concept proposals.

d. The Field Medical Service School POI was not considered as an appropriate topic for consideration by the working group. However resource requirements cannot be identified, planned and programmed until the size and frequency of the training requirements are known.

e. The work group limited their deliberations to the officer community in that adequate numbers of enlisted personnel are currently being trained and exist in both the hospital corps and dental technician community. The training requirement for each officer corps was considered individually.

2. CONCLUSIONS AND RECOMMENDATIONS.

a. The group strongly recommends that ALL Navy Medical Department Officers receive training prior to reporting for duty

with the FMF. The recommended essential training by officer corps is as follows:

- (1) Medical Corps (2100) - Combat Casualty Care Course (C4)
 - FMSS
 - 1 week Medical Staff Planning
 - 1 week Marine Corps indoctrination and field survival skills
- (2) Dental Corps (2200) - same as above.
- (3) Nurse Corps (2900) - same as above.
- (4) Medical Service Corps (2300) - FMSS
 - 1 week Medical Staff Planning
 - 1 week Marine Corps indoctrination and field survival skills
 - 1 week Marine logistic support system

b. The recommended priority of training is:

- (1) Personnel being assigned to the FMF in accordance with MPA.
- (2) Augmentee personnel including reserve.
- (3) MMART personnel.

c. It is recommended that OPNAV, NMPC and Navy Medical Command be informed of the Headquarters Marine Corps requirement that the above described medical readiness training programs be implemented.

3. RECOMMENDED ACTION OFFICER AND OFFICE.

Major General DAY
HQMC Code T

REPORT ON EXERCISES IN THE FMF

1. BACKGROUND AND DISCUSSION.

a. The work group consisted of the following personnel.

CAPT HODGES	LCDR RAYMOND
CAPT McALLISTER	LCDR ROBINSON
CAPT ABBOTT	LCDR NEWTON
CAPT HEASTER	LCDR BARTON
CAPT HAIN	LCDR BAKER
CAPT REEVES	LCDR BUFFINGTON
CAPT SKELLY	LCDR RYAN
CAPT FERRIS	LCDR ROACH
CDR CRIMM	LCDR KLOSE
CDR COXE	LCDR MORTON
CDR McCARTY	LT FRANK
CDR LOOS	LT GEORGE
CDR SIDES	LT LUNDGREN
CDR HART	LT CAIN
CDR PARSONS	Ms. SALTMAN
CDR COLE	

b. All Marine Corps medical units involved in field training must ensure that all opportunities for exercising total medical systems are utilized. Each directed exercise normally allows segments of medical systems to be evaluated and tested and must be seized and exploited to the fullest.

2. CONCLUSIONS AND RECOMMENDATIONS.

It is recommended that each Marine Corps unit use each exercise opportunity to test and evaluate medical support systems involved in providing the continuum of care for the Landing Forces.

3. RECOMMENDED ACTION OFFICER AND OFFICE.

All Senior FMF Medical Department Officers in a position to influence or direct the exercise/testing of the Marine Corps medical care systems.

REPORT ON CREATION OF "RESUPPLY" AMAL

1. BACKGROUND.

a. It has been recommended that a "resupply" AMAL be established to include portions of the consumables carried by Med Log Company.

b. The work group consisted of the following personnel:

LCDR ROMAN, Chairman
CAPT ROPER, Consultant
CDR LUDWIG, Consultant
LCDR LAWRENCE
LCDR UPTON
LCDR LIBBY
HMCM BOWMAN

2. DISCUSSION. The working group clearly expressed that the basic concept of a resupply AMAL was an appropriate idea that should be adopted. However, numerous questions still exist in the details of implementing this suggestion.

a. A thorough review of the AMALs considering the results of the Standardization Steering Group must be completed.

b. The AMALs must be reviewed vis-a-vis their established missions, especially the SST AMAL's roles in beach evac stations and Helicopter Support Teams and the role of the Pharmacy AMALs in support of sick call functions.

c. Suggested configurations have included organizational lines (i.e., ward resupply block), Time line (i.e., 5 day resupply block), force size (i.e., MAU/MAB/MAF) and numerous combinations of the above. This area requires and deserves additional study.

3. CONCLUSIONS AND RECOMMENDATIONS.

a. The concept of resupply AMALs is valid and appropriate to the FMF.

b. Configuration of these resupply AMALs will require additional study before implementation. It is recommended that concerned commands study this concept and prepare point papers for discussion at next year's FMF Medical Officer's Conference.

4. RECOMMENDED ACTION OFFICER AND OFFICE.

Commanding Officer, Med Log Company
1st Supply Battalion
1st FSSG

STANDARDIZED AMAL BLOCK CONFIGURATION

1. BACKGROUND.

a. It has been suggested that the AMALs be modularized in a single standard configuration with the same material in the same container in all similar blocks at all locations.

b. The work group consisted of the following personnel:

LCDR ROMAN, Chairman
CAPT ROPER, Consultant
CDR LUDWIG, Consultant
LCDR LAWRENCE
LCDR UPTON
LCDR LIBBY
HMCM BOWMAN

2. DISCUSSION.

a. The work group felt that this goal could not be currently be attained but that a packaging scheme that had certain types of items placed in pre-designated containers is feasible. The scheme is that narcotics and other high-security items be in container one; refrigerated items in container two; corrosives, flammables, and other special handling items in container three; and IV fluids with fluid paths, etc. in container four and following. Gases would be at the end of the numbering sequence. Packaging of all other items would be at the discretion of the AMAL module manager. If a particular AMAL does not have one of these types of items, the numbering scheme would be advanced to avoid gaps. The first container of "normal goods" should contain a packaging/locator listing so that this listing would not become separated from the block.

b. The implementation of a totally standardized configuration of AMALs is not considered feasible for a variety of reasons. These reasons can be grouped into three areas: (1) Size considerations both in external containers and in the contents, (2) management considerations, and (3) restrictions on the local commander's flexibility.

(1) Implementation of standardized configuration requires uniformity of size both in the container and contents. This uniformity is not currently available within each MAF or within the FMF. Except for the Medical Chest, there is no standardized container. For instance, 1st Med Log Co has AMAL 640-OR consumable packaged in metal chests, 4.2 cube wooden boxes, and 54 cube wooden crates because the cost of metal chests precludes their exclusive use. The contents of the blocks are also not of uniform size. As the AMALs change over time, usable "old" gear is legitimately substituted for "new" requirements. Additionally, identical

requirements may be satisfied with different models of equipment, perhaps from different manufacturers. There are often significant differences in the size of these items. For instance, the Life Pak 33 is still in use to satisfy the requirements for Life Pak 5s. The 33 is approximately 4 times the size of the 5, and has more stringent packaging requirements. Within the consumable AMALs, similar problems exist. Replacements for expiring items may or may not be the same size. For instance, some manufacturers compress cotton goods to save space and shipping costs while others do not. These size differences necessitate either changing the size of the container or the introduction of "dead space".

(2) Management of a standardized containerization would be very difficult. This management would best be placed at HQMC. However, HQMC does not have the personnel assets to accomplish this and does not have on hand any medical supplies or equipment. To design a packaging scheme without gear on hand would be extremely difficult. The lack of a common data base and computer support would only exacerbate pre-existing problems.

(3) A standardized configuration would place restrictions on the local commander's flexibility in meeting requirements unique to his mission and geography, as well as impinging on his authority to modify the AMALs within 10% of cube and weight.

3. CONCLUSIONS AND RECOMMENDATIONS.

a. Currently, it is infeasible to implement a totally standardized configuration.

b. It is recommended that the limited scheme given above be adopted by each AMAL manager.

4. RECOMMENDED ACTION OFFICER.

Commanding Officer
Med Log Co
1st Supply Battalion
1st FSSG

REPORT ON MEDICAL BATTALION/DENTAL FORCE STRUCTURE

1. BACKGROUND/DISCUSSION

a. Work Group Participants:

CDR LOOS, Chairman
CAPT WILLIAMS, Consultant
CAPT DAVIDSON, Consultant
CAPT JONES, Consultant
CAPT FALCONE, Consultant
CAPT LUTHER, Consultant
CAPT FENNER, Consultant
CDR COXE
CDR COLE
LCDR ROACH
LCDR RYAN

b. The proposal to incorporate the Medical Battalion and Dental Battalion into a single battalion was discussed at length. General consensus was that more priority should be placed on restructuring the Medical Battalion to meet the medical support requirements of the Marine Corps Marine Corps Mid-Range Objectives Plan (MMROP). It is also conceivable that medical and dental restructure could diminish the in-garrison dental support for the Marines, while not contributing significantly to the mission of the Medical Battalion.

2. CONCLUSIONS/RECOMMENDATIONS

a. The proposal to combine the Medical and Dental Battalions should be rejected at this time. HQMC and MCDEC should direct their efforts toward enhancing the Medical Battalion and providing an improved system for augmenting required personnel assets.

b. Any reorganization of the Medical Battalion must consider the entire spectrum of medical support to the FMF and how this will relate to other medical assets in an amphibious objective area, such as casualty receiving treatment ships (CRTS), the Rapidly Deployable Medical Facility (RDMF) and, in the future, hospital ships and fleet hospitals.

3. RECOMMENDED ACTION OFFICER/OFFICE

a. Not Applicable

REPORT ON MEDICAL BATTALION REORGANIZATION IN THE FMF

1. BACKGROUND/DISCUSSION

a. Work Group Participants

CDR LOOS, Chairman
CAPT WILLIAMS, Consultant
CAPT DAVIDSON, Consultant
CAPT JONES, Consultant
CAPT FALCONE, Consultant
CAPT LUTHER, Consultant
CAPT FENNER, Consultant
CDR COLE
CDR COXE
LCDR ROACH
LCDR RYAN

b. General consensus was that there is a need for the Medical Battalion to be structured to meet the existing Marine Corps Mid-Range Objectives Plan (MMROP). The reorganization proposed by MCDEC appears to meet those requirements. Enclosures (1) and (2) contain the MCDEC proposal and the interim proposal submitted herewith as our position.

2. CONCLUSIONS/RECOMMENDATIONS

a. HQMC should task MCDEC to expand their study and proposal to consider in detail all areas impacted by this, to include increased T/O and T/E requirements. Special consideration must be given to additional organic assets (trucks, generators, tents, communication gear, weapons, etc.) and medical equipment assets (O.R.'s, Labs, X-rays, Wards, etc.).

b. In the interim, field commands should do an in-house study and submit "get-well" recommendations via the appropriate FMF command channels.

3. RECOMMENDED ACTION OFFICER/OFFICE

a. HQMC and MCDEC (for Recommendation "a.")

b. Medical Battalions (for Recommendation "b.")

MCDEC PROPOSAL FOR MEDICAL BATTALION REORGANIZATION

1. BACKGROUND AND DISCUSSION

a. At the 1982 FMF Medical Department Officers' Conference a proposal was presented recommending the establishment of a 960 Bed, 36 Operating Room Medical Battalion to replace the current battalion. This proposed battalion included the resources in the present Dental Battalion, FSSG. The proposal was not adopted for formal recommendation.

b. In February 1983, CG MCDEC presented a proposal to the Fleet Marine Forces that would disestablish the current Dental Battalions and transfer their assets to the Medical Battalion. FMFLANT conditionally concurred. FMFPAC non-concurred.

c. Casualty rate validation indicates that the current Medical Battalion cannot support a four day evacuation policy. Standard planning data suggests that less than 5% of wounded in action admissions and less than 20% of disease non-battle injuries would be returned to duty within this four day period.

d. Deployment options described in the Marine Corps Mid-Range Objectives Plans (MMROP) and Marine Air Ground Task Force (MAGTF) "building" described in various concept papers prepared by the Advanced Amphibious Study Group (ASSG) indicate that the current Medical Battalion organization lacks the flexibility required by these various options.

e. In order to meet the medical support combat casualty care requirements a restructured and resized Medical Battalion is proposed:

(1) Battalion Organization

- 1 H & S Co
- 4 Surgical Co (4 OR's and 80 Beds each)
- 2 Medical Co (1 OR and 60 Beds each)
- 2 Hospital Co (6 OR's and 160 Beds each)

(2) Battalion Total: 30 OR's and 760 Beds

Enclosure (1)

(3) Medical unit allocation for planning

(a) MAU - 1 Surgical Co

(b) MAB - 2 Surgical Co
1 Medical Co
1 Hospital Co

(c) MAF - Entire Battalion

(d) Above allocations would include appropriate detachments from the H&S Company.

Enclosure (1)

WORK GROUP INTERIM PROPOSAL FOR
MEDICAL BATTALION REORGANIZATION

1. BACKGROUND/DISCUSSION/CONCLUSIONS

a. The proposal for restructuring the Medical Battalion as a 760 bed, 30 operating room unit was discussed in detail. From this discussion the following conclusions have been drawn.

(1) There is a need to look into methods of improving medical support for casualty care.

(2) The present Medical Battalion is not so structured that it can provide optimum support.

(3) The proposal for an enlarged Medical Battalion is incomplete in that

(a) No mission statements have been developed

(b) The numbers and types of personnel have not been considered and consequently could not be discussed

(c) There has been no consideration given to the development of organizational equipment, logistic demands (including transportation), electric power, and general support

(4) That because of the above, the proposal was premature.

(5) That the proper development of the proposal will take a considerable amount of time, and therefore adoption and actual execution of all facets of the proposal could not be expected for several years.

(6) That, in consequence of above, there exists a need for near term restructuring of the current medical battalion to make it more flexible, responsive, and capable.

2. RECOMMENDATIONS

a. Devote the immediate energies of the MCDEC planning to a restructuring of the present Medical Battalion to make it more capable of bringing initial wound surgery and the necessary supportive measures to relatively forward area as quickly as possible.

b. That the above be brought to a conclusion within the next six months.

Enclosure (2)

c. That after the above is completed, there be development of the proposed enlarged Medical Battalion to support the MMROP, and that this plan investigate in detail the several related facets mentioned.

d. That upon completion of both 2a and 2c, they be submitted to CG FMFPAC and CG FMFLANT for comments.

Enclosure (2)

FIELD MEDICAL SERVICE SCHOOLS (FMSSs) TRAINING

1. BACKGROUND AND DISCUSSION

a. The conference group consisted of representatives from: CNO, CMC, NMPC, NAVMEDCOM, PROJMGR FLTHOSP, FMSS CP, FMSS CLNC, HSETC, 1st MED BN, and 2d MED BN. Personnel in attendance were:

CAPT R. C. HODGES, MSC, USN - CO FMSS CP (Chairman)
CAPT D. F. HAGEN, MC, USN - OP-939
CAPT M. A. BOGDANSKI, NC, USN - HSETC
CAPT W. H. BENEDICT, MSC, USN - NAVMEDCOM-552
CAPT R. S. SKELLY, MSC, USN - CO FMSS CLNC
CDR T. FISHER, MSC, USN - OP-132C9
CDR P. N. ACKLEY, MSC, USN - FLTHOSP PROJECT OFFICE
CDR E. J. LOOS, MSC, USN - CO 1st MED BN
CDR L. RAYMOND, MSC, USN - NMPC-407
CDR N. REUTER, MSC, USN - NMPC-407
MAJ J. K. COBB, USMC - Training Dept, HQMC
MAJ G. J. WRIGHT, USMC - Training Dept, HQMC
LCDR J. A. UNSEN, MSC, USN - NAVMEDCOM-55
LCDR W. L. ROACH, Jr., MSC, USN - CO 2d MED BN
LT T. J. LITTLE, MSC, USN - OP-939E
LT J. N. GALLIS, MSC, USN - NMPC-407C
ENS M. R. AUSTIN, MSC, USN - NMPC-407C

b. The conference objectives were:

- (1) Identify and prioritize training categories,
- (2) Evaluate training schedules to maximize utilization of present resources and program additional resources, if required, and
- (3) Identify and resolve problems resulting from incomplete liaison between NMPC, HSETC, and subject schools with regard to students arriving without prior notification.

2. CONCLUSIONS AND RECOMMENDATION

a. Training categories were addressed in detail in the FMF Medical Department Officers Conference at HQMC 6-10 June. The categories and essential training recommended for medical department officers by corps are as follows:

- (1) Medical Corps (2100) - Combat Casualty Care Course (C4)
 - FMSS
 - 1 week Marine Corps Indoctrination and Combat Survival Skills
 - 1 week Medical Staff Planning

(2) Dental Corps (2200) - same as above

(3) Nurse Corps (2900) - same as above

(4) Medical Service Corps (2300) - FMSS

- 1 week Marine Corps Indoctrination and Combat Survival Skills

- 1 week Medical Staff Planning

- 1 week Marine Logistic Support Systems

b. The recommended priority of training is:

(1) Personnel being assigned to the FMF in accordance with MPA.

(2) Augmentee personnel including reserves.

(3) MMART Personnel.

(Training of personnel for deployable medical facilities (RDMF, FLTHOSP, etc.) was discussed but no attempt was made to include this type training in the priority listing because too many unknowns exist. It was the opinion of the group that any part of training these personnel that envisions utilizing training capabilities of the Marine Corps be the subject of early concurrent planning between OPNAV and HQMC.)

c. Field Medical Service School training schedules were reviewed and discussed. Throughput at FMSS to satisfy the officer training requirement identified above and to permit maximum assignment opportunities of HM/DT personnel to FMSSs requires schedule changes at both schools. Cancellation of one five-week enlisted course per school could provide six two-week windows of training opportunity for officers (or reserves) training, three at each school. This would also accommodate NMPC's request for staggered dates for HM/DT training at the FMSSs. The conferees agreed that schedule changes were indicated and that an additional program of instruction be developed for senior HM/DTs that although different skills/subject matter be presented, it run concurrently with the basic five-week HM/DT course. FMSSs will coordinate this effort with Code T/HQMC and MCDEC.

d. Past problems encountered by FMSSs on predicting training workloads and better utilization of available training opportunities at the FMSSs were discussed.

(1) A need for a central control point for officer and enlisted training was identified and the OP-939 representative indicated his office would provide for this.

(2) A method of identifying officers who have completed FMSS training is required.

(3) It is recommended that Navy Medical Department officer and enlisted training requirements be refined and identified to HQMC. Officer training should be time-phased by quarter of availability of TAD funding or PCS transfer opportunity.

PROPOSED CAREER PROGRESSION TO SENIOR USMC BILLETS FOR NAVY MEDICAL OFFICERS

	<u>DIVISION</u>	<u>FSSG</u>	<u>WING</u>
	INTERNSHIP		
LT	Op Utilization → Bn Surgeon Tour	or FSSG Surgeon	or Pensacola Flt Surg School Sqd Flt Surg
LCDR	Specialty Training ↓ Board Certification Hospital/Clinic Utilization Tour		Clinical Specialty Training Hospital/Clinic Tour
CDR	USMC Command and Staff College		MPH (Master Public Health) +
106	Regimental Surg or Asst Div Surg	or Med Bn-FAC U to NavHosp in clinical specialty	NAMI (Aerospace Clinical Trng) ↓ Bd Certification in Prev Med Aerospace Medicine
	NRMC or Clinic in Clinical or Specialty	or Senior Medical Officer LHA/LHD/ LSD or major Naval Dispensary/Clinic	MCAS Yuma/El Toro/Cherry Point/Futenma/Iwakuni or major Navy Air Station
CAPT	Naval War College Division Surgeon	or ICAF FSSG Surgeon	Senior Staff College Wing Surgeon
	FMFLANT/FMFPAC/CO Naval Hospital/Clinic Hdqtrs USMC/OP-093/(Flt Support) NavMedCom Geo Commands/CO Flt Hosp/CO Hosp Co/CO NAMI		
COMO/RADM	USMC-The Medical Officer/NavMedCom/OP-093/Geo Commands		

NOTES:

1. Ad hoc assignment, as appropriate, prior to specific billet requiring:
 - Short courses in military medicine, ie: C4, Cold Weather, CW/BW, Tropical Medicine
 - Short courses in military/executive proficiency, ie: LMET, SMRC, Management, Military Justice
2. Proposed tracks are not "bound in concrete" but suggested as a means by which senior USMC billets are more likely to have personnel assigned with an appropriate background.
3. This office would encourage alternate assignments between USMC operational tours and "blue" clinical assignments as being beneficial to both the individual and to the Navy Medical Department.
4. N.B. - This proposed track provides background and experience which would make individual eligible for flag rank consideration.

22 March 1983

COLD WEATHER MEDICAL TRAINING

BACKGROUND

The practical application of experience gained through Cold Weather Training continues to be a major benefit to successful Cold Weather Operations. The past practice of training at the unit level and during actual Cold Weather Training exercises left medical units with personnel who had little or no experience and unable to provide adequate support to assigned operational forces. This situation continues to be resolved through ongoing Cold Weather Medical Training, which originally started through Colorado, Outbound and eventually moved to present site at Camp Ripley, MN. The current training effort completed on 03 March 1983 added another 77 Cold Weather Medical Trained individuals bringing the total trained to approximately 302.

OBJECTIVES

The overall objectives of the training program for Medical Department personnel are to prepare them to:

- a) survive in the cold
- b) Function effectively and with confidence in the cold
- c) conduct military (medical) operations in the cold
- d) know how to prevent cold injury
- e) be able to manage cold injuries correctly
- f) provide instruction at the troop/unit level in appropriate cold weather practices

The overall goal is to prepare Medical Department personnel to provide intelligent, informed advice to operational commanders in an effort to alleviate unnecessary risk or injury and to eliminate the potential for mission degradation.

FY-83 Training Priorities for Medical Department Personnel

- a) Fleet Marine Force 71
- b) NRMCC, Camp Pendleton, CA (support for MCMWTC, Bridgeport) 3
- c) Other Naval Personnel in support of Cold Weather Operations 6
- d) FY-83 Student distribution by Corps

MC	-	11
DC	-	2
MSC	-	5
NC	-	1
HM	-	56
DT	-	2

Total 77

EVOLUTION OF TRAINING

The six initial training courses were conducted in conjunction with the Colorado Outward Bound School (COBS), out of Denver, Colorado (due to the Lack of an adequate Navy/Marine Corps training site). The training site was more than adequate; however, as course content was developed and refined to match identified training requirements, it became increasingly more difficult to incorporate military objectives. In a civilian setting, particularly under the direction of instructors with no prior military experience, the differences in philosophy and approach to training could not be easily resolved. The decision was made to seek an appropriate military training site where the obvious need to incorporate military and clinical objectives could be facilitated. Over time, the Army National Guard Training Site at Camp Ripley, Minnesota was identified as an available and suitable training site.

Presently there are proposals under review to determine the future of Cold Weather Medical Training and a suitable site for its accomplishment. The Marine Corps Mountain Warfare Training Center (MCMWTC), Pickel Meadow, Bridgeport, CA continues to be considered the most logical site. Some upgrading and renovation of existing facilities are underway, but much has yet to be done. The original estimate had anticipated the site to be available for training additional Medical Department personnel during the 1983/1985 winter. The decision to move Cold Weather Medical Training to MCMWTC continues to be logistically questionable.

PROJECTED PLANS

The uncertainty of the global strategic situation and the unknowns of future theaters of operation necessitates a continued effort in cold weather medical training. The overall goals:

- a) develop and maintain a cadre of instructors
- b) continue training programs targeted at developing expertise within the operational units
- c) continue, jointly with the Marine Corps, to achieve mission oriented military/clinical training goals
- d) developed audio-visual and textual materials for specific levels of training (basic, intermediate, advanced) as the cold weather medical training program evolves.

22 March 1983

OPERATIONAL READINESS TRAINING COURSE FOR NURSE CORPS OFFICER

1. During CY82, three courses were sponsored. Each course was attended by approximately 40 Nurse Corps officers. Two of the courses, April and September, were held in a field setting at MCDEC, Quantico, VA. June's course was held in a classroom setting at the Naval School of Health Sciences, Bethesda, MD due to unavailability of Marine Corps assets.
2. Due to the vast success of these courses and based on the analysis and recommendations of previous training, it was determined that CY83 courses should be conducted in a more realistic field setting at Camp Lejeune and Camp Pendleton. This field-oriented program would better help to lay the foundation, skills, and knowledge required for combat casualty care and management in any environment. In order to provide this more realistic, meaningful, hands-on training experience, plans were initiated to have the 2D Force Service Support Group and 2D Medical Battalion at Camp Lejeune and the 1st Force Service Support Group and 1st Medical Battalion at Camp Pendleton provide the necessary support requirements. The courses will be co-sponsored by the Naval Health Sciences Education and Training Command and the Naval Regional Medical Centers at Camp Lejeune and Camp Pendleton. Each co-sponsoring hospital has designated a Nurse Corps officer to assist NHSETC with course arrangements and execution. The Naval Health Sciences Education and Training Command will continue to handle all curricular and administrative requirements.
3. Based on participant feedback and because of training site relocation, a final revision of the curriculum was completed in September 1982. The new curriculum adapted not only to the changes required for the field setting, but also reflected the recommendations for course improvement and enhancement from participants and instructors. The current outline of instruction is as follows:
 - a. FMF Organization and Medical Support
 - b. Medical Department Responsibilities in Amphibious Operations
 - c. Contingency Planning and Threat Brief
 - d. Law of Armed Conflict
 - e. Leadership Under Stress
 - f. Heat Stress
 - g. Cold Weather Medicine
 - h. Nuclear Casualty Management
 - i. Medical Considerations of Chemical Warfare
 - j. Chemical Warfare Personal Defense
 - k. General Considerations of Field Medicine and Echelons of Medical Care
 - l. Combat Injuries/High and Low Velocity Missile Wounds
 - m. Triage
 - n. Combat Psychiatry

Each area of concentration is presented by experts in the field and most are supported by handouts and special readings. The one-week course will be held in the field; living, working, and learning within a modified medical company. Most of the topics include practical experiences. Evaluation of course objectives is through practical application of skills and principles, and through performance checklists. Each participant is provided a copy of the training manual which includes all objectives, outlines, handouts, references, training aids, and evaluation materials.

4. Two training evolutions have been confirmed and logistically organized for 6-10 June 1983 at Camp Pendleton, CA and 20-24 June 1983 at Camp Lejeune, NC. Two other courses, one at each site, are scheduled for September. Nominees for attendance will be solicited from each medical treatment facility in conjunction with the Nurse Programs Director, Code 34, Naval Health Sciences Education and Training Command. The training list should be completed and approved by May 1983.

BRIEF

MILITARY FIELD MEDICAL SYSTEMS STANDARDIZATION

BACKGROUND

For many years, each of the Services planned, procured and fielded deployable systems with little or no interservice coordination. This often resulted in systems with similar missions, but differing characteristics, capabilities and, most importantly, costs. This raised concern within the defense establishment and among the political leadership of the government.

In order to contain costs, the concept of line item management with a single Service acting as the executive agent was developed. For instance, the Army is the executive agent for all conventional ammunition. Defense agencies, such as the Defense Logistics Agency, came into being to standardize much of the procurement within the Defense Department.

Over the years, Congress was asked to approve funding for acquisition of different deployable medical systems for each Service. The cost of these combat casualty care assets rose steadily. Most significantly, the cost of these field hospitals varied widely among the Services. In congressional hearings for the FY 1981 budget, Congress identified its concern. The FY 1982 hearing continued in the same direction. The Services had difficulty in defining the reasons for the apparent differences. Congress denied funding for most deployable medical systems and virtually mandated standardization among the Services for deployable medical systems. At the same time a Flag/General officer working group was established at the Services' initiative to address deployable medical system standardization.

The congressional concern and the Services' effort culminated in DoDI 6430.1, "DoD Deployable Medical Systems". This instruction prescribed policy, assigned responsibilities concerning standardization and acquisition of deployable medical systems. It formally established the Military Field Medical Systems Standardization Steering Group (MFMSSSG). Most significantly the instruction stated, "It is the policy of the Department of Defense to standardize deployable medical systems, to achieve maximum standardization, increase efficiency, and minimize costs. DoD components shall acquire only those field deployable medical systems submitted by the MFMSSSG and approved by the Assistant Secretary of Defense (Health Affairs)."

In May 1982, OASD(HA) provided funds to the MFMSSSG to allow a tri-service review of the casualty care model developed at the Army Academy of Health Sciences - Combat Development Center, Fort Sam Houston, Texas. This report is the result of that effort.

APPROACH

The Combat Casualty Care Model was developed to identify the requirements for field medical care. The essential parts of this computer model include:

- (1) Patient profile - A list of 309 diagnoses, the frequency of which must be determined for a specific scenario.
- (2) Treatment protocols - A list of tasks which are to be accomplished at each echelon of care indicating the optimum provider for each diagnosis.
- (3) Sets, kits, and outfit models - A list of trays, durable or investment equipment associated with specific tasks for each diagnosis.
- (4) Consumables list - Defined in association with each task for each diagnosis.

Panels of medical specialists and technical experts, most of whom had combat experience, were convened as follows:

<u>Panel #1</u>	<u>Date</u>	<u>Functional Area</u>
1	1 Nov 82	Operating Room General Surgery Orthopaedic Surgery Anesthesia Operating Room Equipment
2	15 Nov 82	Surgical Specialties Urology Thoracic Surgery Neuro Surgery Gynecology
3	17 Jan 83	ENT/Oral Surgery Eye Burns/PT
4	31 Jan 83	Admissions/Triage ICU Dermatology Wards
5	14 Feb 83	Internal Medicine GI, Neurology, Infectious Disease Preventive Medicine
6	28 Feb 83	Lab Blood Bank Blood Bank Radiology Pharmacy

<u>Panel #1</u>	<u>Date</u>	<u>Functional Area</u>
7	14 Mar 83	Biomedical Equipment Repair CMS
8	28 Mar 83	Clinic/Review/Reconciliation
9	11 Apr 83	Logistic Review

The approach used to review the model was a set of sequential steps. Each panel or subpanel reviewed the trays and durable sets appropriate to its area of knowledge. Next the consumable packages were reviewed. If necessary, the panel developed a "consumable" package consisting of durable supplies which would be expended in care and would accompany the patient; for instance, traction fittings. The treatment protocol for diagnosis was then reviewed to assure appropriateness of the task list, time required, and the preferred treater. Changes, additions, and deletions were identified. The investment equipment was reviewed with specific recommendations for non-standard items. Finally, the trays, sets, consumables, and equipment were matched against specific tasks.

RESULTS

All panels and subpanels completed their allotted tasks. The Academy of Health Sciences will load the revised data base(s) to their computer and will run a casualty profile (309 diagnoses) against this tri-service reviewed model.

Assuming the model demonstrates the adequacy of this review of the medical outfitting, this data base will be submitted to and through the MFMSSSG for recommendation as the standardized data base from which to acquire deployable medical system medical outfitting.

DoDI 6430.1, "DoD Deployable Medical Systems", requires shelter approval from the joint committee on tactical shelters. The MFMSSSG has recommended use of the DoD standard family of electrical generators.

The following components of a deployable medical system require review for standardization:

- (1) Power Distribution
- (2) Utility Systems (water, waste, and P.O.L.)
- (3) Environmental Control
- (4) Food Service
- (5) Laundry
- (6) Patient Transportation

The MFMSSSG has recommended that further efforts be directed toward achieving standardization of these medical support functions.

TALKING PAPER

For Use by the Medical Officer, United States Marine Corps

Subj: Medical Officer FAC U Program

BACKGROUND. The Functional Area Code (FAC) U identifies billets that fall within Marine Corps billet claimancy but which have additional duty counterpart billets in a shore-based naval medical facility. The affected billets span nearly the full spectrum of Medical Corps Naval Officer Billet Classification (NOBC) codes and specialties pertinent to Marine Corps requirements. There are currently 69 FAC U billets. Incumbents in FAC U billets physically report to the naval medical facility for additional duty and report by letter to the Marine Corps parent activity. Personnel assigned to FAC U billets are required to have either current Fleet Marine Force experience or to have completed Field Medical Service School prior to reporting. Personnel assigned to FAC U billets are available to their parent activities for routine training for a period of two weeks per year. They are also available for other training or operational requirements as necessary. The recall of personnel assigned to FAC U billets for either routine or non-routine requirements is at the discretion of the Marine Commander and the expense of the Navy Medical Department.

DISCUSSION. The following points are significant:

a. The option to recall personnel filling FAC U billets, for either training or operational requirements, lies with the Marine Commander. The mechanism for recall is simple. The Marine Commander notifies the appropriate naval medical facility, by letter or message, of his requirements. The notification should be specific in terms of identification of required personnel, a brief description of the requirement, and the specific reporting and detachment dates required.

b. Naval medical facilities are expected to program and budget funds to support the annual two week TAD requirement for all FAC U personnel. If an activity is short of funds to support a requirement, the Naval Medical Command (NAVMEDCOM) is committed to providing the necessary additional resources.

c. It is the responsibility of the Marine Commander to provide meaningful annual training evolutions for the personnel assigned to FAC U billets. That can be as structured as formal training (the medical staff planning courses given by Landing Force Training Command, Pacific, for example), or no more than an on-base field training exercise.

MPC-26-dmm
D7
18 Apr 1983

Subj: Medical Officer FAC U Program

d. The Commanding Officer of the naval medical facility should prepare a concurrent fitness report and forward that report to the Commander, Naval Military Personnel Command via the Commanding General/Commanding Officer of the parent Marine Corps command. The responsibility for fitness report continuity lies with the Marine Commander. Details are contained in NAVMILPERSCOM INST 1611.1 w/Ch-1.

e. A proposed joint Navy-Marine Corps Directive, OPNAVINST 1300.__; Subj: Administration of Personnel Assigned to Billets Coded with Functional Area Code U, has been prepared by MPC-26. That Directive has completed preliminary review by CMC Codes MPC and MED, and is now undergoing review within NAVMEDCOM.

UNCLASSIFIED

TALKING PAPER

For Use by the Medical Officer, United States Marine Corps

Subj: POM Initiatives for USMC-Assigned Navy personnel

Background. Changes to Navy end strength are initiated by means of Program Objective Memoranda (POM). Increases to end strength must therefore be justified and pursued via POM initiatives. In July-August each year, the Manpower Department (MPC-26) solicits input from the staff agencies within the Headquarters concerning desired increases. The T/O sponsors provide input relative to programmed new units, while the functional sponsors identify increased requirements in existing units. When all input has been received, requirements are consolidated, reviewed, adjusted where necessary, and forwarded to the Requirements and Programs Division for submission to the Navy. That Division is then responsible for looking after the Marine Corps' interests relative to the POM until budget execution (FY-85 through 89 for POM-85). During budget execution the Manpower Department (MPC-26) reenters active participation by ensuring that approved increases are entered into the Marine Corps' billet files.

Discussion: The following points are significant:

- a. The POM is not automatic. The Marine Corps must compete for Navy manpower with all other major claimants within the Navy manpower system. POM growth does not usually provide full funding of all programs. As a result, not all POM initiatives are approved as submitted.
- b. When POM growth is less than that requested, allocation is accomplished by the Manpower Department (MPC-26), in consultation with the T/O and functional sponsors as appropriate, and consistent with any constraints imposed by OPNAV.
- c. Field activities desiring to achieve end strength growth must communicate their requirements to either the appropriate T/O or functional sponsor.

TALKING PAPER

Subj: Senior Medical Department Enlisted/Officer FMSS Course

BACKGROUND. Based on a task analysis conducted by the Health Sciences Education and Training Command (HSETC), Bethesda, a curriculum was developed by the Field Medical Services School (FMSS), Camp Lejeune, North Carolina to support the subject course.

DISCUSSION:

a. This Headquarters (Code T) assumed cognizance for coordinating curriculum development.

(1) The Instructional Management Division (IMD), MCDEC, Code E-03, was tasked with providing technical support, as required.

(2) This Headquarters has received periodic progress reports concerning the course.

b. Progress Report #1 (23 December 1982)

(1) IMD visited FMSS to assist with establishing curriculum developmental priorities.

(2) Job Data Sheets for course were in preparation stage.

(3) Upon review of initial task list, FMSS made task additions for training.

c. Progress Report #2 (10 February 1983)

(1) School requested assistance in development of course lesson plans and review of "concept cards".

(2) IMD will conduct assistance visit to FMSS during March 1983.

(3) Facilities/equipment constraints for field training were noted.

(4) Female billeting unavailable at this time.

(5) Ten personnel are expected to attend pilot course.

d. Progress Report #3 will be submitted during March 1983.

UNCLASSIFIED

Subj: Senior Medical Department Enlisted/Officer FMSS Course

e. Based on information received from the field, it appears that the subject course will convene on 24 July 1983.

RECOMMENDATION. None. For information only.

UNCLASSIFIED

POINT PAPER

Subj: Navy/Marine Corps Reserve Realignment (Medical)

- ° Naval Reserve Program 9 applies to Naval Support of the 4th Marine Division and 4th Force Service Support Group. Naval Reserve Program 5 applies to the 4th Marine Aircraft Wing. Program responsibilities are:"
 - °° CNO exercises command through CNAVRES
 - °° CMC acts as program sponsor through DC/S RA
 - °° Commanding Generals of the 4th MarDiv/4th FSSG and 4th MAW coordinate and integrate training and insure mobilization readiness.
- ° In October 1981, the Deputy Assistant Secretary of the Navy for Reserve Affairs tasked the Navy and Marine Corps to:
 - °° Ensure that Naval Reserve call-up procedures support the SMCR
 - °° Establish definitive lines of command and control to coordinate Navy and Marine Corps readiness and mobilization objectives
 - °° Provide adequate lines of communication and procedures for Naval Reserve Support of SMCR training
 - °° Activate cadred medical and dental units
- ° The following actions have been accomplished:
 - °° Medical support requirements have been identified to the lowest mobilization unit level.
 - °° Unit action letters realigning and relocating Program 9/5 personnel assets were in the field effective 1 October 1982
 - °° Personnel recruitment and assignment programs doing well
 - °° Command and Control, Administration, and Management procedures are to be promulgated in a revised joint Chief of Naval Reserve Instruction/Commanding General Order pending completion.

- ° Effective 1 October 1982, Naval Reserve billets matched Selected Marine Corps Reserve mobilization requirements and the Marine Corps Table of Organization. Medical units in support of the Marine Aircraft Wing are drilling at Naval Air sites. Total units in support of the Selected Marine Corps Reserve increased to 149.
- ° The equipment portion of the plan to enhance medical and dental support to the SMCR has involved various separate programming efforts on the part of both the Navy and Marine Corps.
- ° CNAVRES was tasked to develop those blue dollar requirements for authorized medical and dental allowance lists and the 4th DWT developed the training allowance for Marine Corps purchased T/E items such as generators, ambulances, and tentage.
- ° BUMED is responsible for maintaining the wartime equipment and supplies within the Navy War Reserve Project (NAVWARP), Marine Corps Reserve.
- ° CNO is ultimately responsible for directing release of the blue dollar allowances for use by the SMCR in the form of a training allowance.
- ° CMC must then reimburse the Navy for the dollar value of those allowances withdrawn.
- ° OPCON of the Naval Reserve supporting units as outlined in the pending CNAVRES instruction is exercised through assigned medical/dental company/battalion commanders, and senior surgeons at each SMCR echelon of command in coordination with applicable SMCR commanders. ADCON is exercised through Naval Reserve Readiness Commands and Navy Air Reserve Readiness Echelon III activities.
- ° The key to the success of reorganization and Selected Marine Corps Reserve mobilization readiness is having qualified personnel assigned. The total numbers of hospital corpsmen and dental technicians, disregarding special skills, is adequate; however, when specialty is considered, the manning percentage of billets by personnel fully qualified by Navy enlisted classification (NEC) code is not good. The most serious shortfall is in the medical field service technician area. The goal is to have all personnel attain this NEC within three years of assignment to the unit. The joint instruction clearly establishes procedures and responsibilities for NEC attainment. A similar, but not as serious, problem exists in the officer manning picture.

- ° These joint Navy and Marine Corps actions will provide the basis for activating the cadred medical and dental units in the 4th FSSG.
- °° Currently the Marine Corps has approved the following POM-85 initiatives
 - °°° To provide 13 FTS Marine Corps Reserve personnel to support the above program.
 - °°° To purchase Medical and Dental Battalion Logistics support for equipment costing in excess of \$3000 per item.
- °° Currently pending Navy approval is a POM-85 initiative.
 - °°° To provide 11 Navy officers and 60 Navy enlisted for additional active active duty/I-I support to the Medical and Dental Battalions.
- °° Medical and Dental Battalion activation schedules will depend upon the success of these initiatives.

TALKING PAPER

For use during the 1983 FMF Medical Department Officer's Conference Briefs

Subj: Capabilities of Amphibious Afloat Medical Support

BACKGROUND. A variety of amphibious ships are capable of providing services as casualty receiving and treatment ships (CRTS) after augmentation as indicated:

<u>Medical Personnel Only</u>	<u>Personnel and Surgical Supply Blocks</u>
LHA	LPD
LPH	LSD
LHD	

- ° Medical personnel augmentation via Mobile Medical Augmentation Readiness Teams (MMART)
- ° Material support augmentation via surgical team supply blocks.

DISCUSSION.

- ° The larger amphibious ships (LHA, LPH, LHD):
 - °° Provide medical support prior to establishment of shore care facilities
 - °° Serve to evacuate wounded combatants
 - °° Have intensive care beds (other ships use converted troop space)
- ° Amphibious Ship Medical Facilities:

<u>CATEGORY</u>	<u>SHIP CLASS</u>	<u>OPERATING ROOMS</u>	<u>HOSPITAL BEDS</u>
PRIMARY CRTS	LHA	4	300
" " "	LPH	2	148
" " "	LHD*	6	600
SECONDARY CRTS	LPD*	1	12
	LSD*	1	38
	LST	0	14
	LCC	2	23

* Includes LHD-1, LSD-41, LPD-X

° Amphibious Ship Medical Support Capability for selected years:

<u>YEAR</u>	<u>ORS</u>	<u>BEDS</u>
83	65	3,800
88	70	3,750
90	79	4,300
94	97	5,400
97	111	6,800

° The amphibious ship medical role is that of a "flow-through" facility that will stabilize casualties and ready them for med-evac.

UNCLASSIFIED

MPI-48:dp
9 Mar 1983

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Code MED)

Subj: 1983 FMF Medical Department Officer's Conference Brief

BACKGROUND. In the past, information on Navy personnel assigned duty with Marine Corps units has been restricted to name, SSN, pay grade, MOS and Marine Corps Formal School data.

DISCUSSION. The need exists in the Medical Department to be kept better apprised of current capabilities and training requirements of Navy personnel serving with Marine Corps units or those who would be assigned upon mobilization. As a result of a Medical Department request, additional items will be reportable on Navy personnel commencing in October, 1983 with the implementation of JUMPS/MMS Test Cycle 2-83. Items being added for Navy personnel include race, sex, security clearance information, marital status, number of dependents, education level and current active duty began date. Additional information has recently been added to MCO P1080.20H, JUMPS/MMS Codes Manual, to identify unique occupational specialties of medical personnel, as provided by the Medical Department, that may now be reported into JUMPS/MMS as other service MOSs for Navy medical and dental personnel.

RECOMMENDATION. That Navy administrative units managing Navy personnel assets serving with the Marine Corps commence providing desired information to Marine Corps units with Navy personnel. An advisory notice will be published by the Manpower Department advising Marine Corps units of information which may be reported into JUMPS/MMS now and that information which may be reported beginning in October 1983.

UNCLASSIFIED

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Code MED)

Subj: Woodland Blend Lightweight Camouflage Screening System (LCSS)

BACKGROUND: The LCSS is a replacement for the burlap garnished twine camouflage nets which have been declared obsolete and are no longer available within the DoD supply system.

DISCUSSION: The LCSS is fabricated of synthetic materials and is available in two basic types: (1) radar scattering to prevent enemy detection by visual, photographic, and radar means, (2) radar transparent for use over active radar equipment to prevent detection by visual and photographic means.

Initial issue procurement of the woodland blend LCSS is currently programmed through FY89 due to production being limited to 60,000 sets per year.

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Coded MED)

ITEM: Marine Corps Expeditionary Shelter System (MCESS)

BACKGROUND: MCESS traces its background to December 1969 when an evaluation of FMF inventory of air and ground shelters revealed that 75 types existed. A hardware development and test program started in 1973 was aimed at reducing the many types of shelters. A Required Operational Capability (ROC) was published in 1977. The Small Shelter Family has completed the Full Scale Development phase of the acquisition cycle and MSARC Milestone III (Approval for Service Use) documentation is being prepared.

DESCRIPTION: The family consists of four shelters, and a joining corridor and complexing kit. Sizes include an 8'X8'X20' Rigid, an 8'X8'X20 Rigid EMI, an 8'X8'X20' Knockdown, and a 8'X8'X10' EMI. These shelters are complexable and are compatible with current and projected transport configurations. Use of International Organization for Standardization (ISO) corner fittings and size standards enhances the mobility requirements for air, rail, sea, and truck transport of shelters. The shelters have been approved as DoD standard by the Joint Committee on Tactical Shelters.

CURRENT STATUS: MSARC III Approval for Service Use is planned for July 1983.

REQUIREMENTS: Current inventory planning includes the following quantities:

- 1,396 For replacement of current shelters worn out in service over the next several years.
- 896 For certain specific medical functions now housed in tents within the Medical Battalion.
- 380 Communication operations now housed in tents.
- 555 Electronics maintenance complex under development.

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Code MED)

Subj: High Mobility Multipurpose Wheeled Vehicle (HMMWV)

BACKGROUND: On hand M274, M151, and M561 series light tactical vehicle assets are overage, T/E deficient and mission degraded. Replacement of the light tactical vehicle fleet is required to sustain FMF readiness.

DISCUSSION: The HMMWV program is an accelerated acquisition intended to provide a 1½-ton capacity vehicle with common engine chassis and drive train capable of satisfying various light tactical vehicle mission roles through the use of special purpose kits and different body configurations. The HMMWV production contract was awarded on 22 March 1983 to AM General Corporation after extensive prototype test/evaluation. HMMWV models include troop/cargo, TOW, weapons, and shelter carriers as well as ambulance variants. Marine Corps procurement of two HMMWV ambulance variants is planned.

TRUCK, AMBULANCE - 2 LITTER SOFT TOP, M1035

Front line ambulance capable of transporting a minimum of 2 litters and 2 seated patients that replaces M718 ambulance on one for one basis.

Acquisition objective 382.

Procure ments planned are: FY83 - 27; FY84 - 164; FY85 - 156; and FY86 - 30.

Initial fielding FY85.

TRUCK, AMBULANCE - 2 LITTER AMORED, M996

More capable ambulance able to transport four litter or 6 ambulatory patients and providing some in-transit care capability. System specification description attached.

Replaces M792 ambulance on one for one basis. Allowances all within the Medical Battalions.

Acquisition objective 91.

Procure ments planned are: FY85 - 45; FY86 - 46.

Initial fielding late FY85.

3.6 Ambulance Configuration:

When specified, the following requirements shall be applicable to both the 2 Litter and 4 Litter Ambulances (except where noted).

(1) Minimum ballistic protection, which affords protection for the crew and patient/passengers, against a 16 grain fragment with a critical velocity of 425 m/s and a zero degree obliquity shall be provided. However, protection against a 44 grain fragment with a critical velocity of 650 m/s and a zero degree obliquity is desired.

(2) Provision shall be made for heating the patient compartment to maintain an interior temperature above 70°F (20°C) throughout the basic and cold climatic design types. Heat shall be introduced near the lowest patient and exhausted near the ceiling. The temperature differential between inlet and exhaust must be no greater than 5.5°C. Capability for cold climatic design types may be obtained with kit application.

SPECIFICATION (Cont'd)

3.6 Cont'd

(3) Provision shall be made to provide ventilated face piece collective NBC protection for all crew positions, minimum of three. Provision shall also be made to provide ventilated hood collective NBC protection for a minimum of four litter patients in the patient compartment.

(4) Sound levels in the patient areas shall not exceed noise category E, MIL-STD-1474. Sound levels in the patient area not exceeding noise category F, MIL-STD-1474 is desirable.

(5) Provisions shall be made to permit visual and verbal contact between driver and personnel in the patient area.

(6) The ambulances shall provide for general illumination internal lighting as well as focus type lighting for each litter position. Adjustable, focus type lights must provide a minimum of 30 foot candles of power on a horizontal plane to a point of six inches above and centered for the entire length of the litter. The use of the general and/or focus type lighting shall be performed at night during blackout conditions without compromising blackout discipline. The white lighting shall also be automatically cut off when either of the back doors is opened. Blackout lighting shall consist of one incandescent lamp fixture with blackout lens conforming to Paragraph 3.4.17, located on the ceiling centerline in the forward part of the patient compartment.

(7) Provisions shall be made for IV hooks/hangers in the ceiling of the patient compartment. Four on each end of the patient compartment. Hooks/hangers shall be flexible to avoid injury to a patient or attendant bumping into a solid protrusion.

(8) The ambulances shall have provisions for DC power outlets in the patient compartment. A duplex three contact convenience outlet shall be provided in a location convenient to the attendant. A second three contact duplex convenience outlet shall be provided at the rear of the patient compartment convenient to the attendant on the ground with doors open. The receptacle shall be two-wire, two-prong, twistlock and furnished with a male plug compatible to the receptacle. The receptacle and the plug shall be rated and marked for 24-volt usage. Vehicle fuse box shall be wired to provide power with ignition off.

(9) The ambulances shall provide for easy removal of Geneva Convention (Red Cross) markings without alteration of underlying camouflage paint.

(10) The ambulance patient compartments shall provide racks or cabinets for stowage of medical supplies and equipment, with ready access to the following:

Stretcher (Litter) 4 req'd	per STANAG 2040 and weighs approximately 10 lbs each NOTE: Litters should be stored or positioned away from the litter racks only when ambulatory patients are being carried.
1 blanket set (8 per set)	Approximately 27 in X 14 in X 17 in, and weighs approximately 32 lbs per set

SPECIFICATION (Cont'd)

3.6 Cont'd

(10) Cont'd

1 spineboard, long	Approximately 22 in X 74 in X 2½ in, and weighs approximately 20 lbs each
1 spineboard, short	Approximately 22 in X 38 in X 1 in, and weighs approximately 10 lbs each
1 chemical patient protective wrap pack (4 wraps per pack)	Approximately 13 in X 12 in X 10 in, and weighs approximately 2½ lbs per wrap (10 lbs per pack)
Surgical instrument & supply set, individual (aid bag) 2 req'd	Approximately 12 in x 10 in x 14, and weighs approximately 18.5 lbs per set
1 splint set	Approximately 36 in X 12 in X 7 in, and weighs approximately 18.5 lbs per set.
1 aspirator/ resuscitator	1500 watts, 102 lbs, 24 in wide (transverse), 36 in high & 13 in deep (fore & aft) NOTE: Item under development.
1 portable monitor, heart	165 watts, 21 in x 16 in X 9 in, and weighs approximately 50 lbs each. NOTE: Item under Development.
IV Solution 2 boxed req'd	IV solutions boxed, consisting of 12 500 ml solution bags per box. Each box approximately 14 in X 10 in X 8 in, and weigh approximately 17 lbs each. Each bag is approximately 8 in X 5 in X 2 in, and weighs approximately 1.4 lbs each.
Oxygen "D" 4 req'd	NSN 6650-00-132-5181, and approximately 22½ cylinder in long X 4½ in diameter, and weighs approximately 16 lbs each.

(11) The ambulance compartments shall provide oxygen (O₂) storage racks for size "D" tanks. A minimum of four oxygen (O₂) "D" cylinders shall be located in the vehicle. These may be positioned into a central bank/location or located at the forward area of the patient compartment in close proximity to each of the litters.

SPECIFICATION (Cont'd)

3.6 Cont'd

(12) The ambulance compartments design shall provide for stowage of the upper litter racks (without constituting a safety hazard) while the lower fixed litter racks serve as seats for ambulatory patients.

(13) The ambulance compartments shall be designed with two (2) center open, swing rear doors. The doors must open wide enough to facilitate loading of litters onto side wall mounted litter racks.

(14) Walk-through access shall be provided between the vehicle cab and the patient area of the 4 Litter Ambulance and is desired for the 2 Litter Ambulance.

(15) An extension capability of the vehicle radio communications shall be installed in the ambulance compartments.

(16) Provision for powered ventilation of the patient area shall be furnished. Fresh air intakes shall be located in the most practical contaminant free air space on the vehicle.

(17) An air conditioning system for the 4 Litter Ambulance, which may be provided as a kit, shall be designed such that a maximum Wet Bulb Globe Temperature Index of 25°C will be maintained throughout the entire patient area. The system shall be designed to assure that fresh air can be introduced when air cooling is not required.

(18) Lights, fans, heater, and DC power outlets in the patient compartment shall be wired independently of the ignition switch.

(19) The ambulance shall accommodate the standard NATO litters in accordance with STANAG 2040.

3.6.1 2 Litter Ambulance:

When specified, a 2 Litter Ambulance shall be provided. The patient compartment shall have a pop-up or vertical extension capability and shall be capable of carrying in an emergency four (4) litter patients, six ambulatory, or 2 litter and 3 ambulatory patients. The patient compartment dimensions shall not be less than the following:

Length 103 inches
Width 73 inches
Height 42 inches (expandable to 65 inches)

The 2 Litter Ambulance shall be capable of transporting a minimum of two (2) litter patients routinely with an emergency expansion to four (4) litter patients. Provisions shall be made for securing the litters into the litter racks. Ambulance crew consists of the driver and one attendant whose crew station may be in the cab passenger seat or in the patient compartment on a track mounted seat.

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Code MED)

Subj: Commercial Utility Cargo Vehicle (CUCV)

BACKGROUND: On hand M880 series assets have reached service life and require replacement to sustain FMF readiness.

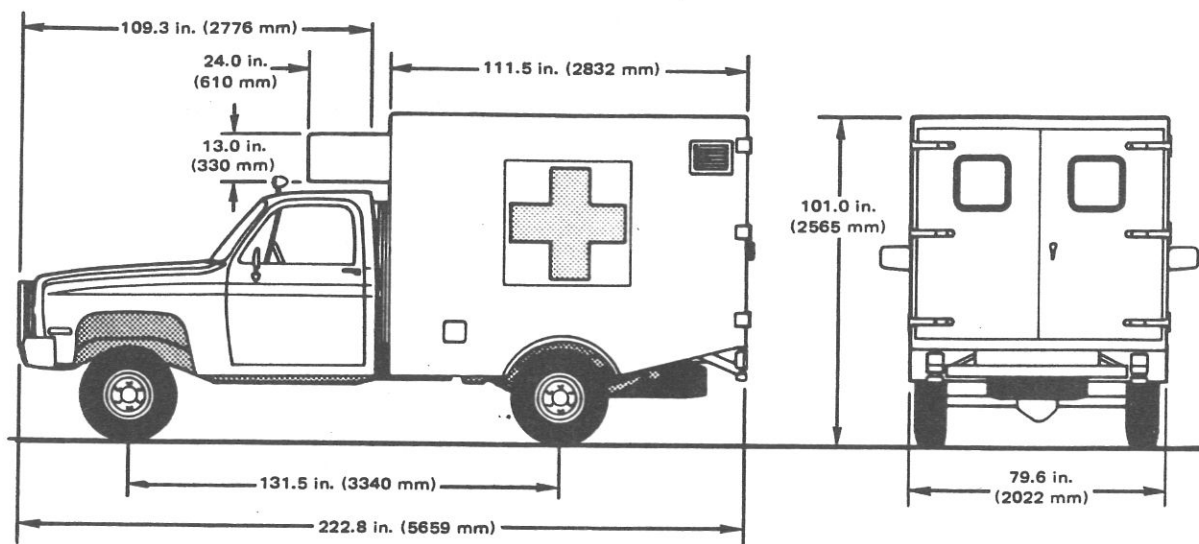
DISCUSSION: The CUCV program is an accelerated non-developmental acquisition intended to replace M880 series vehicles and to substitute for High Mobility Multipurpose Wheeled Vehicles (HMMWVs) in those units not requiring the full mobility and capability of the more expensive HMMWV. CUCV production contract was awarded on 20 May 1982 to General Motors. CUCV variants include a utility, cargo, shelter carrier, and ambulance variant. Significant points concerning the CUCV ambulance are as follows:

- a. Ambulance description attached.
- b. Totally replaces M886 ambulance.
- c. All requirements, total quantity 253, accommodated in FY84 procurement.
- d. Deliveries expected to be completed during FY84.

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DIMENSIONS

Exterior



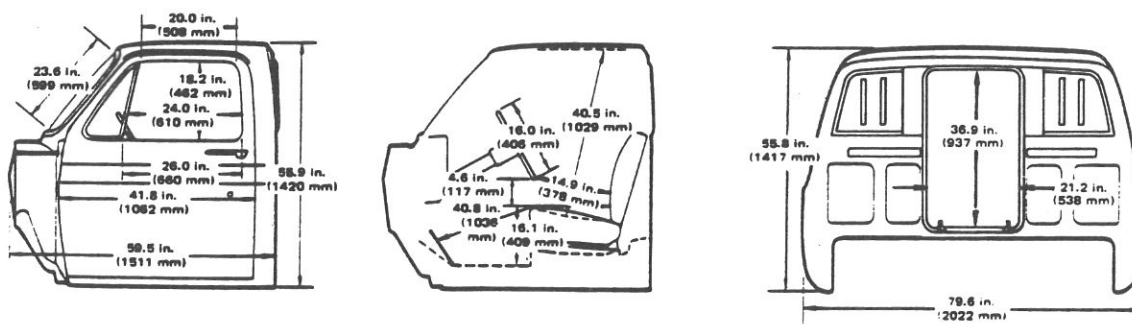
Notes: (1) Dimensions with standard equipment, unloaded

(2) Ground Clearance

- Front: 8.3 in. (211 mm)

- Rear: 7.7 in. (196 mm)

Interior



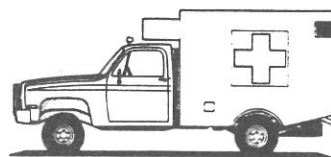
GLASS AREA

in.² (cm²)

WINDSHIELD	1447 (9333)	REAR SIDE DOOR WINDOW (each side) ON CREW CAB INCLUDING FIXED WINDOW	488 (3148)
FRONT SIDE DOOR WINDOW (each side) INCLUDING VENTIPANES	546 (3522)	REAR WINDOW	790 (5096)

Note: Interior dimensions measured with front seat in rearmost position; seat travel is 5 inches.

CUCV TYPE C — AMBULANCE



MILITARY DESIGNATION: Type C, Truck Ambulance, Tactical, 5/4-Ton, 4x4, M1010

MILITARY TASKS: Ambulatory and Litter Evacuation

GM MODEL: K30903, Chassis/Cab With Ambulance Body, 9555 lb (4334 kg) GVW

SPECIFICATIONS:

Engine: GM 6.2-liter (379 in³) diesel, 135 SAE net horsepower (101 kW) at 3600 rpm, 240 lb·ft net torque (325 N·m) at 2000 rpm

Transmission: GM THM 400, 3-speed automatic, ratios: 2.48, 1.48, 1.0, and 2.10 (reverse)

Transfer Case: New Process 208, 2-speed, ratios: 2.61 and 1.0

Rear Axle: GM 7500 lb (3402 kg) capacity, full-floating, ratio: 4.56

Rear Suspension: 3500 lb (1588 kg) capacity (each spring), semi-elliptic, 2-stage, multi-leaf

Front Axle: Dana/Spicer 60, 4500 lb (2041 kg) capacity, full-floating, ratio: 4.56

Front Suspension: 2250 lb (1021 kg) capacity (each spring), tapered leaf

Wheels: 16.5 x 6.75, one piece

Tires: 9.50R16.5(E), on/off road

Electrical System: 28-volt, 200-ampere; 12-volt lighting and control system

PERFORMANCE: (at GVW)

- 3% grade at 55 mi/h (80 km/h)
- 6% grade at 45 mi/h (64 km/h)
- 30% grade at 10 mi/h (16 km/h)
- 16- to 20-inch (406-508 mm) fording capability
- Capable of operation in ambients from -10°F to 120°F (-23°C to 49°C); with winterization kit, operational capability extended to -50°F/-46°C

MILITARY REQUIREMENTS:

- Air conditioning for patient compartment
- Air transportability
- Blackout lights
- Camouflage paint
- Engine diagnostic connector assembly
- Equipment stowage compartments
- Gas particulate filter unit provisions
- Multi-purpose towing/tiedown eyes
- Military markings
- NATO standard litter support system
- Nuclear, biological, and chemical (NBC) warfare protection
- NBC kit provisions
- Radio provisions
- Removable Red Cross insignia
- Spot/flood lighting system
- Transport for four litter or eight ambulatory patients
- Winterization kit add-on capability

TALKING PAPER

For use by Medical Officer of the Marine Corps (Code MED)

Subj: Field Laundry Units

BACKGROUND: The current Field Laundry Unit M532, trailer mounted, is being replaced by a skid mounted laundry unit housed in a 8'X8'X10' ISO Shipping Frame. This unit will consist of a washer, a separate extractor, and a separate dryer. The power unit and heating units will be provided as separate end items. The heating unit will be the same unit as planned for the Field Bath Unit.

DISCUSSION: The procurement profile for this unit is as follows:

	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
QTY	56	16	0	75	40	10
FUNDS	1.2	.5	0	2.5	1.4	0.4

The technical data package has been completed and is under review. Expected procurement for this unit will be the 1st Qtr FY84, through Naval Weapons Support Center, Crane, Indiana.

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Code MED)

Subj: Field Bath Unit

BACKGROUND: The current Field Bath Unit, trailer mounted, is being replaced by a mobile skid mounted multi-fuel fired, heater which can be used with the Laundry Unit. The bath unit will provide 16 gallons of filtered water per minute to eight shower heads at a regulated temperature of 95°F to 105°F. The eight shower heads are in separate stall arrangements and can be interconnected in modules to expand to a larger shower base.

DISCUSSION: The procurement profile for this unit is as follows:

	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>	<u>FY88</u>
QTY	44	34	0	120	100	100	100
FUNDS	.8	.7	0	2.9	2.5	2.8	2.8

The technical data package has been completed and is under review. The expected procurement for this unit will be the 1st Qtr FY84 through Naval Weapons Support Center, Crane, Indiana.

TALKING PAPER

For use by the Medical Officer of the Marine Corps (Code MED)

Subj: Small Mobile Water Chiller (SMWC)

BACKGROUND: The requirement to provide cool water for drinking and for treatment of heat casualties has been identified with the birth of the Rapid Deployment Force, now U.S. Central Command, in the SouthWest Asia (SWA) operational area. The Small Mobil Water Chiller was developed by U.S. Army MERADCOM for that purpose. The unit weight is 305 lbs. and is capable of cooling intake water of 120°F to 60°F ± 10°F at a delivery rate of 40 gallons per hour.

DISCUSSION: The SMWC is part of the MAB water supply equipment. This special equipment is being procured for the MPS Brigades. Six systems are planned. Three systems are planned for prepositioning and three are to be used for training for the MPS designated MABs. Each MPS MAB will have 83 SMWC. Current plans are to buy 166 units in FY83, 166 in FY84, 83 in FY85, and 83 in FY86. This procurement will be managed by U.S. Army MERADCOM, Fort Belvoir, Virginia.

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TALKING PAPER

For use by FMF Medical Department Officer's Conference attendees

Subj: LHA Heat Acclimatization Space/Protocols

BACKGROUND. The Marine Corps has a need for heat acclimatization of troops aboard ships enroute to operations in high temperature environments and 70 x 80 ft. acclimatization chambers were included for this purpose in the design of the new, large amphibious assault ships (LHAs). There are five LHAs in commission with heat chambers ready to be used, and Navy medical research to develop protocols for heat acclimatization aboard LHAs and other ship types is in the final stages. A significant impact on tropical combat capability is foreseen with these new acclimatization procedures, with total work and combat capacity of field units significantly increased through reduction of heat casualties.

DISCUSSION.

a. Heat acclimatization is an established, scientifically accepted phenomenon consisting basically of a decreased elevation in heart rate and body temperature and an increased sweating response for a given climate and exercise load. Correlated with these and other changes are field data indicating that acclimatized men have a significantly lower incidence of heat illness (heat cramps, heat exhaustion, heat stroke), and thus, heat acclimatization is of practical value as well as of scientific interest.

b. The Fleet Marine Forces could face serious problems with heat casualties during military operations in hot, humid climates with troops freshly arrived from a temperate climate. The seriousness of the heat casualty problem is exemplified by the After Battle Report of Amphibious Squadron 9 (CTG 76.5) of 21 August 1967, reporting Operation Beacon Torch, a 14 day search and destroy operation in South Viet Nam 18 June - 2 July 1967. Out of a total of 284 casualties during the 2 weeks, 42% were due to heat, 34% were noncombat other than heat, and 24% were due to combat. Thus, heat illness was the largest single category of casualty, and the number of heat casualties (118) was almost twice that of the category normally associated with warfare, i.e. combat casualties (69). Regarding how typical this experience was, it was noted that, "temperatures range from 85 to 105°F, causing the usual number of heat casualties."

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c. Heat acclimatization studies currently underway at the Naval Medical Research Institute (NMRI) in Bethesda, Maryland,

consist of developing practical, safe, effective procedures for en route acclimatization of Marines on LHA's and other ships. Self-paced running for 100 minutes, with rest periods every 10 minutes, is the basic exercise protocol designed to produce a core temperature rise to 38-40°C (100.4 - 104.0°F) in 30-40 min., followed by temperature maintenance in this range for the remainder of the period. The basic protocol consists of cool exercise in the hangar deck wearing insulation (sauna suits + thermal underwear) for the first half of the period, followed by hot, humid exercise (wet bulb/dry bulb T = 88°/92°F) in the heat chamber without insulating garments. This two-step approach was designed to alleviate the apparent bottleneck at the acclimatization chamber with 1600 men expected to exercise 100 min/day. To provide maximum versatility in ships with chambers, appropriate exercise protocols are also being developed for 100 min cool exercise wearing insulating garments and 100 min hot, humid exercise in the heat chamber, using the same target thermal response profile as a guide for developing suitable work/rest cycles. Self-paced running is proving to be practical to give predictable thermal responses, and to give the expected shifts of final values of pulse rate, core temperature and sweat production over a 10 day acclimatization period. Work/rest cycles have been developed in experiments currently being completed that give the same thermal response profile in all three temperature and clothing regimens being examined, and all three appear to be safe, simple to administer, practical and effective. Based on these data, an extensive literature search and at-sea trials of the chambers and protocols, an acclimatization manual is being prepared by NMRI for submission in the summer of 1983, with the expectation that operational trials will be conducted after approval, presumably during FY 1984.

RECOMMENDATION. None, provided for information.

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IV-F-3
MED/plm
44477
9 May 1983

REFERENCE NOTEBOOK ITEM

SUBJECT: Fleet Hospital

OVERVIEW: Fleet Hospitals are modular, rapidly erectable, relocatable medical facilities for treatment of wounded Navy and Marine Corps personnel. Fleet Hospitals will receive patients from amphibious task force ships, directly from medical units organic to Marine forces, and from hospital ships. Fleet Hospitals can be staged in CONUS or pre-positioned either afloat or overseas in advance of hostilities. They will be stored in a packed and preserved condition and erected rapidly when needed. They will use existing buildings as much as possible.

Fleet Hospitals will have two basic configurations: Combat Zone and Communications Zone. Combat Zone medical/surgical hospitals will be housed in combinations of expandible containers and Tent, Extendable, Modular, Personnel (TEMPER) tents which can be erected by the hospital staff in 48-72 hours. Communication Zone hospitals will provide a full range of definitive care and will be housed in paneled structures and long-span fabric tents which will require a Seabee Battalion 15-25 days to erect. The tactically relocatable Combat Zone hospitals will be lighter, more mobile, smaller, and less expensive than the Communications Zone hospitals.

STATUS: A prototype partial Fleet Hospital was designed, purchased and tested under hot and cold weather conditions in 1980 and 1981. The President's FY-82 budget requested \$87.8 Million for purchase of the first six hospitals; however, Congress did not provide funds for Fleet Hospitals in FY-82. It did provide in FY-82 \$25 Million to the Marine Corps for 1,000 beds of rapidly deployable medical facilities (RDMF) to support the Marine Corps component of the RDF. This 1,000-bed RDMF will consist of augmented allowance list items for four Marine Corps 250-bed hospital companies. The RDMF will be pre-positioned afloat in the Indian Ocean in June 83.

The President's FY-83 budget contains \$73.8 Million (OPN) for four Combat Zone Fleet Hospitals (two 250-bed and two 500-bed configurations). Procurement has commenced. Initial operational capability (IOC) is CY-85. The complete program procurement profile for Fleet Hospitals is illustrated below:

FLEET HOSPITAL PROCUREMENT PLAN						
	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85</u>	<u>FY-86</u>	<u>FY-87</u>	<u>FY-88</u>
Hospitals	(1) 250 CBTZ (1) 250 CBTZ (2) 500 CBTZ	(2) 500 CBTZ (1) 500 COMM Z	(1) 500 COMM Z (1) 1,000 COMM Z (1) 500 COMM Z	(1) 500 COMM Z (1) 1,000 COMM Z (1) 1,000 COMM Z	(1) 500 COMM Z (1) 1,000 COMM Z (1) 500 CBTZ (1) 250 CBTZ	(1) 500 COMM Z (1) 1,000 COMM Z
	(4) 1,500 Beds	(3) 1,500 Beds	(3) 2,000 Beds	(3) 2,500 Beds	(4) 2,250 Beds	(2) 1,500 Beds
OPN	73.8	70.0	80.8	92.5	106.5	65.1

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ATTENDEES

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RADM J.A. ZIMBLE, MC, USN, The Medical Officer, USMC
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CAPT R.D. CHANEY, MC, USN, Division Surgeon, 2nd MarDiv
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 CAPT M.D. KERSTEIN, MC, USN, Group Surgeon, 4th FSSG
 CAPT L.W. SHIVERTAKER, MC, USN, Group Surgeon, 3rd FSSG
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LCDR J.O. TAYLOR, MSC, USN, Medical Admin Officer, 1st Marine Brigade
LT W.P. FRANK, MSC, USN, Health Services Support Officer, 1st FSSG
LT M.A. BARTON, NC, USN, Chief Nurse, 3rd MED BN, 3rd FSSG
LT C.R. WOODWARD, MSC, USN, MCDEC, Quantico VA
LT R.L. CAIN, MSC, USN, MCDEC, Quantico VA

